

Is Australia's national biosecurity system and the underpinning Intergovernmental Agreement on Biosecurity fit for the future?

MAY 2016

DISCUSSION PAPER

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IGAB Independent Review Panel



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This discussion paper has been prepared on the advice of the Intergovernmental Agreement on Biosecurity Independent Review Panel (the review panel). This discussion paper is intended to facilitate and encourage discussion on the capacity of Australia's national biosecurity system to manage increased biosecurity risk, and the implementation and effectiveness of the 2012 Intergovernmental Agreement on Biosecurity. The views expressed in this discussion paper do not necessarily represent the views of the Australian Government. The Australian Government—including the Department of Agriculture and Water Resources, their employees and advisers—and the review panel members disclaim all liability, including liability for negligence and for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon any of the information in this discussion paper to the maximum extent permitted by law.

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1 The Intergovernmental Agreement on Biosecurity review

Background

Australia's national biosecurity system aims to minimise the impact of pest and disease incursions on the nation's economy, environment and community, while protecting our international reputation for high-quality and safe produce.

Australia's highly regarded biosecurity system and related biosecurity status bring substantial benefits. Domestic consumers benefit from our world-class produce, our agricultural sector benefits from having preferential market access arrangements, and the broader community and the nation's tourism sector benefit from our pristine and unique natural environments.

Australia, especially our agricultural sector, will continue to benefit from a strong national biosecurity system, including realising opportunities from recently signed free trade agreements, and using our reputational advantage to improve global access for Australian products. As a nation we must capitalise on these opportunities while ensuring domestic consumers and local communities are protected, and our international reputation is maintained. All stakeholders in the national biosecurity system—governments, industry and the broader community—share responsibility in ensuring this.

Underpinning Australia's national biosecurity system is the Intergovernmental Agreement on Biosecurity (the IGAB), which came into effect in January 2012. This is an agreement between the Commonwealth, state and territory governments, with the exception of Tasmania, developed to strengthen the national biosecurity system.

At the Agriculture Ministers' Forum (AGMIN) in November 2015, Australian agriculture ministers agreed that a formal review of the IGAB would be completed in 2016. Ministers also agreed that the review would also consider the capacity of Australia's national biosecurity system more broadly and would be led by an independent review panel with relevant skills and experience, supported by the Australian Government Department of Agriculture and Water Resources.

On 4 March 2016, members of the Agriculture Senior Officials Committee (AGSOC)—heads of government agencies responsible for primary industries—agreed the terms of reference for the review and membership of the IGAB independent review panel (the review panel).

On 31 March 2016, the Deputy Prime Minister and Minister for Agriculture and Water Resources, the Hon. Barnaby Joyce MP, announced the commencement of the review.

The full text of the IGAB is available [at Intergovernmental Agreement on Biosecurity](#) on the Council of Australian Governments website. Further information on the IGAB can be found [at Biosecurity Partnerships](#) on the Australian Government Department of Agriculture and Water Resources' website.

Purpose of the review

The review will assess the capacity of the national biosecurity system to manage increased biosecurity risk associated with an increasingly complex global environment; and, identify where adjustments are needed to ensure the system is effective, efficient and flexible and continues to support market access for Australian produce, to minimise primary production costs and to support a healthy economy, environment and community.

The review will also assess the implementation and effectiveness of the IGAB and its schedules, and report to Commonwealth, state and territory ministers responsible for biosecurity matters on findings and recommendations for amendments. The review will recommend if the purpose, goals and objectives, coverage, principles, key components and features of the IGAB are still relevant.

Scope of the review

The IGAB review will consider and provide recommendations on the following terms of reference:

1. The implementation and effectiveness of each section of the current agreement, progress against the priority reform areas outlined in schedules 2–8 and any requirements for revision of the schedules.
2. The suitability of the agreement to underpin the national biosecurity system into the future.
3. Current and likely future biosecurity risks and priorities, including the optimal allocation of resources and availability of required capability and capacity to address those risks and priorities, with particular consideration of risks that may impact Australia's market access arrangements for agricultural products, and the use of innovation in the system.
4. The development of a national statement of intent for the biosecurity system, encompassing the entire biosecurity continuum, including economic and market access, environmental and social considerations for governments, industry and the community.
5. Defining roles and responsibilities of all parties in the national biosecurity system. This should include advice on how the concept of a shared biosecurity responsibility can be better understood and implemented across government, industry, environmental and community groups and individuals.
6. The review of existing cost-sharing arrangements and the potential for implementation of new funding arrangements for all biosecurity activities. Consideration should be given to relevant National Biosecurity Committee projects including:
 - a. The National Framework for Cost Sharing Biosecurity Activities
 - b. The national portfolio investment optimisation model, and
 - c. The national stocktake of biosecurity investment.
7. The development of measurable indicators to assess whether the national system is achieving its objectives, and to identify where adjustments are needed. Consideration should be given to the availability of appropriate and consistent data.

What is not being reviewed

Some aspects of the national biosecurity system will not be considered as part of this review because they are considered out of scope. This includes:

- biosecurity arrangements specific to human health
- matters related to biosecurity Import Risk Analyses (IRAs)
- comprehensive reviews of emergency responses deeds
- response plans, such as the Australian Veterinary Emergency Plan (AUSVETPLAN)
- matters to do with specific biosecurity legislation, and
- matters to do with Australia's international obligations relating to biosecurity.

The review panel

The review is being led by an independent review panel comprising: Dr Wendy Craik AM (Chair); Mr David Palmer; and, Dr Richard Sheldrake AM. Biographies of panel members are at Appendix A: *Review panel biographies*.

The review panel is being supported by a secretariat within the Australian Government Department of Agriculture and Water Resources.

Consultation activities and next steps

The review panel would like stakeholders across Australia to have their say on the national biosecurity system and the IGAB, what works, what doesn't, what could be done better and how to continue strengthening partnerships across the system. Your feedback will help the panel identify where improvements can be made.

The review panel is seeking input from all stakeholders, including governments, industry and the broader community, owing to the vital role they play in the management of biosecurity risks in Australia.

Review process

Consultation will be undertaken in two phases.

This discussion paper will guide the review panel's first phase of consultation, including discussion sessions with key stakeholders and the opportunity to provide written submissions. The sessions and submissions will give the review panel the opportunity to gather information from a broad range of stakeholders.

The review panel's response to the first phase of consultation will be consolidated into a draft report and released for public comment. During the second phase of consultation, stakeholders will be invited to provide submissions on the draft report. Feedback on the draft report will inform the development of the final report and recommendations to governments.

How to contribute

The review panel encourages comments and submissions to this discussion paper or any other relevant feedback by **5 pm AEST Friday 8 July 2016**. The process for making a submission is detailed in section 5 *Making a submission*.

2 Glossary of terms

This table lists and defines the main terms used in this document.

Term	Definition
Appropriate Level of Protection (ALOP)	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 (Source: IGAB). The ALOP for Australia is a high level of sanitary and phytosanitary protection aimed at managing and reducing biosecurity risks to a very low level, but not to zero.
Biosecurity	the management of risks to the economy, the environment, and the broader community, of pests and diseases entering, emerging, establishing or spreading (Source: IGAB).
Biosecurity risks	the potential of a disease or pest entering, emerging, establishing or spreading in Australia; and, the disease or pest causing harm to the environment, or economic or community activities (Source: IGAB).
Biosecurity system	Australia's national biosecurity system encompasses and fully integrates import and export activities, services and functions—into, within, and from Australia—and covers the spectrum of pest and disease threats to Australia's environment, production and people.
Disease	the presence of a pathogenic agent in a host and/or the clinical manifestation of infection that has had an impact (that is, significant negative consequences) or poses a likely threat of an impact. It includes microorganisms, disease agents, infectious agents and parasites (Source: IGAB).
Established pest or disease	a pest or disease that is perpetuated, for the foreseeable future, within any area and where it is not feasible (economically and/or technically) to eradicate the pest or disease (Source: IGAB).
Exotic pest and disease	pests and diseases affecting plants or animals (potentially human beings) that do not normally occur in a particular country (Source: adapted from the IGAB).
Incursion	an isolated population of a pest or disease recently detected in an area, not known to be established, but expected to survive for the immediate future (Source: adapted from the International Standards on Phytosanitary Measures 5 – Glossary of terms).

Term	Definition
Intergovernmental Agreement on Biosecurity (IGAB)	an agreement between the Commonwealth and state and territory governments, except Tasmania. The agreement aims to strengthen the working partnerships between governments, improve the national biosecurity system and minimise the impact of pests and diseases on Australia's economy, environment and the community.
Pest	any species, strain or biotype of the Kingdoms Animalia (excluding human beings), Plantae, Fungi, Monera or Protista that has had an impact (that is, a significant negative consequences), or poses a likely threat to having an impact (Source: IGAB).
Risk beneficiaries	individuals, organisations, and/or industry groups that benefit from risk mitigation measures in response to a biosecurity activity or response; but who may not necessarily contribute financially to these activities (Source: adapted from the IGAB).
Risk creators	individuals, organisations, and/or industry groups that create risks that may result in a disease or pest entering, emerging, establishing or spreading in Australia; and the disease or pest causing harm to the environment, or economic or community activities (does not include governments undertaking biosecurity activities as part of their regulatory responsibilities) (Source: IGAB).
Shared responsibility	a core concept underpinning Australia's national biosecurity system whereby all stakeholders—including Australian governments, industry and the broader community—have important roles and responsibilities in the management of biosecurity risks in Australia.



3 Australia's national biosecurity system

Overview

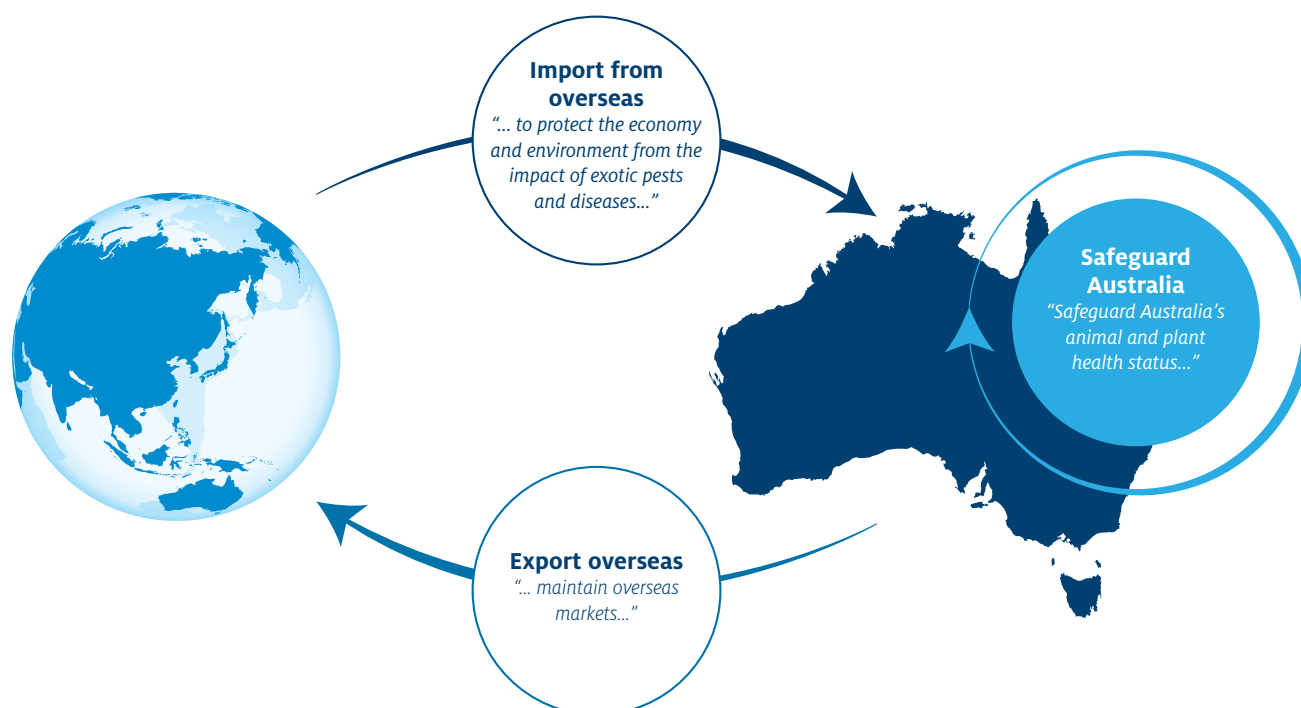
Biosecurity refers to the management of risks to the economy, the environment and the broader community, of pests and diseases entering, emerging, establishing or spreading.

The large number and variety of pathways available for pests and diseases to enter Australia means the national biosecurity system is reliant on the cooperation of Australian governments (Commonwealth and state and territory), industry (including importers and exporters), primary producers and the broader community. The national biosecurity system also relies on those who create risks and those who benefit from the maintenance of the system contributing and playing a role.

The foundation of the national biosecurity system is an operating model for managing biosecurity risks to a level agreed by all Australian governments, the Appropriate Level of Protection (ALOP). This level applies across the national biosecurity system, from the entry of goods and people into Australia through to the deployment of risk-based measures that align effort with risk. Australia's science-based approach to managing biosecurity risks is focused on maintaining our favourable biosecurity status, which has evolved due to its island geography and history of past management. This policy reflects community expectations and provides for a high biosecurity standard that aims to manage and reduce risks to a very low level, recognising that a zero risk stance is not feasible.

The national biosecurity system is extensive. It encompasses and fully integrates import and export activities, services and functions—into, within, and from Australia—and covers the spectrum of pest and disease threats to Australia's environment, production systems and people. The approach to managing biosecurity risks is multi-layered, involving complementary measures applied offshore (pre-border), at the border, and onshore (within Australia, including the marine environment) to achieve the greatest return on investment (Figure 1).



FIGURE 1 Australia's national biosecurity system

Offshore (pre-border) activities are focused on reducing the biosecurity risks associated with imported goods and managing the risks offshore. These activities include:

- understanding global risks through intelligence and surveillance
- working with international trading partners in multilateral forums
- conducting risk assessments and developing biosecurity conditions
- managing ballast water for international shipping movements, and
- undertaking audit and verification activities.

Activities undertaken at the border seek to verify that imports meet required biosecurity conditions, and to intercept biosecurity risks that may be present in live animals and plants, cargo, mail and with passengers to reduce the likelihood of new pests and diseases entering Australia. These activities include:

- working with importers to achieve compliance
- inspections of goods and baggage by biosecurity officers
- the use of detector dogs, x-rays and other detection methods, and
- managing high-risk live animals, production genetics and new plant varieties in post entry quarantine (these imports can assist in further growing Australia's productivity and competitiveness).

Onshore activities (within Australia) are undertaken in partnership with state and territory governments, industry and the broader community to reduce the likelihood of a pest or disease establishing, and minimising the potential impact through early detection activities such as:

- surveillance and diagnostics, and
- capability to prepare for, and respond to, an incursion.

Onshore activities also include the management of nationally agreed responses to pest and disease incursions, led by state and territory governments, as well as the management of established pests and diseases—including containing the spread of those declared under legislation, and maintaining and monitoring pest and disease free areas.

The absence of many significant pests and diseases in Australia safeguards and provides a competitive advantage to Australia's economy. The national biosecurity system plays a vital role in creating, expanding and maintaining export market access for our products and in protecting producers, our natural environment and the broader community from threats posed by pests and diseases. However, across the national biosecurity system there are varying levels of understanding among stakeholders of the role of the system and its various components.

Roles and responsibilities

Maintaining Australia's favourable biosecurity status is a responsibility shared across governments, industry and the broader community, including risk creators and beneficiaries. In some cases, this responsibility is determined by the Australian Constitution and legislation or generated through agreements and consultation. Productive relationships ensure that we maintain a strong national biosecurity system to effectively identify and manage any incursions quickly and prepare for new biosecurity challenges in the future.

The roles and responsibilities of stakeholders in the national biosecurity system are outlined further in section 4 *Embedding shared responsibility*.

Current arrangements to manage biosecurity in Australia

Established relationships and national arrangements are in place between Commonwealth, state and territory governments and (where relevant) industry and other stakeholders to coordinate and implement national action on biosecurity matters. These include:

The Intergovernmental Agreement on Biosecurity

The Intergovernmental Agreement on Biosecurity (IGAB) is an important component of the national biosecurity system. The agreement establishes nationally agreed approaches among governments to prevent, prepare for, detect and mitigate biosecurity risks across the system and respond to, manage and recover from biosecurity incidents should they occur.

The IGAB also establishes the National Biosecurity Committee (NBC). The NBC provides advice to the Agriculture Senior Officials Committee (AGSOC) and the Agriculture Ministers' Forum (AGMIN) on national biosecurity issues and on progress implementing the IGAB. The NBC is responsible for managing a national, strategic approach to biosecurity threats and the impact of these on agricultural production, the environment, community wellbeing and social amenity.

The NBC is supported by a number of sectoral committees—the Animal Health Committee, Invasive Plants and Animals Committee, Marine Pest Sectoral Committee and Plant Health Committee—and ongoing expert groups and short-term, task-specific groups.

Government-industry partnerships

Government-industry partnerships such as Animal Health Australia (AHA) and Plant Health Australia (PHA) facilitate a national approach to enhancing Australia's animal and plant biosecurity systems, through preparedness and emergency response management. These organisations work to improve biosecurity outcomes by:

- conducting emergency plant pest and animal disease preparedness activities
- developing industry-specific biosecurity manuals and promoting on-farm biosecurity
- implementing formal emergency preparedness, and the plant and animal emergency response arrangements, and
- maintaining an active communication pathway between industry and governments.

Formal emergency preparedness and response arrangements

Three formal agreements set out arrangements for responding to exotic pests and diseases that are detected within Australia and have the potential to impact animal, plant or human health or the environment. These agreements are the:

- Emergency Animal Disease Response Agreement (EADRA)
- Emergency Plant Pest Response Deed (EPPRD), and
- National Environmental Biosecurity Response Agreement (NEBRA).

These arrangements are formal agreements between governments and (where relevant) industry signatories—and AHA and PHA (as appropriate)—covering the management and funding of responses to emergency animal diseases, plant pests, or where a pest and disease primarily impacts the environment and/or social amenity (where the response is for the public good).



4 Biosecurity into the future

Over the last decade, managing biosecurity risk has become more challenging and complex. Globalisation, international and interstate migration, climate change, tourism, and the movement of goods are all contributing to shifts in biosecurity risks. In a constantly changing biosecurity environment there is a need to ensure Australia's national biosecurity system is meeting its intended goal and objectives.

As with any system, Australia's national biosecurity system should be subject to ongoing review and continuous improvement. Decision making and strategies need to be able to readily adapt to meet biosecurity challenges over the horizon and into the future.

Improved collaboration between governments, industry and the broader community will help minimise duplication and further strengthen the national biosecurity system with flow-on benefits for producers, industry and the broader community.

The review panel is interested in your views on the issues outlined in this paper, along with practical suggestions on mechanisms to strengthen the national biosecurity system, potentially facilitated through a renewed IGAB. The issues discussed in this paper were identified by the review panel following preliminary discussions with a selection of stakeholders from industry and government.

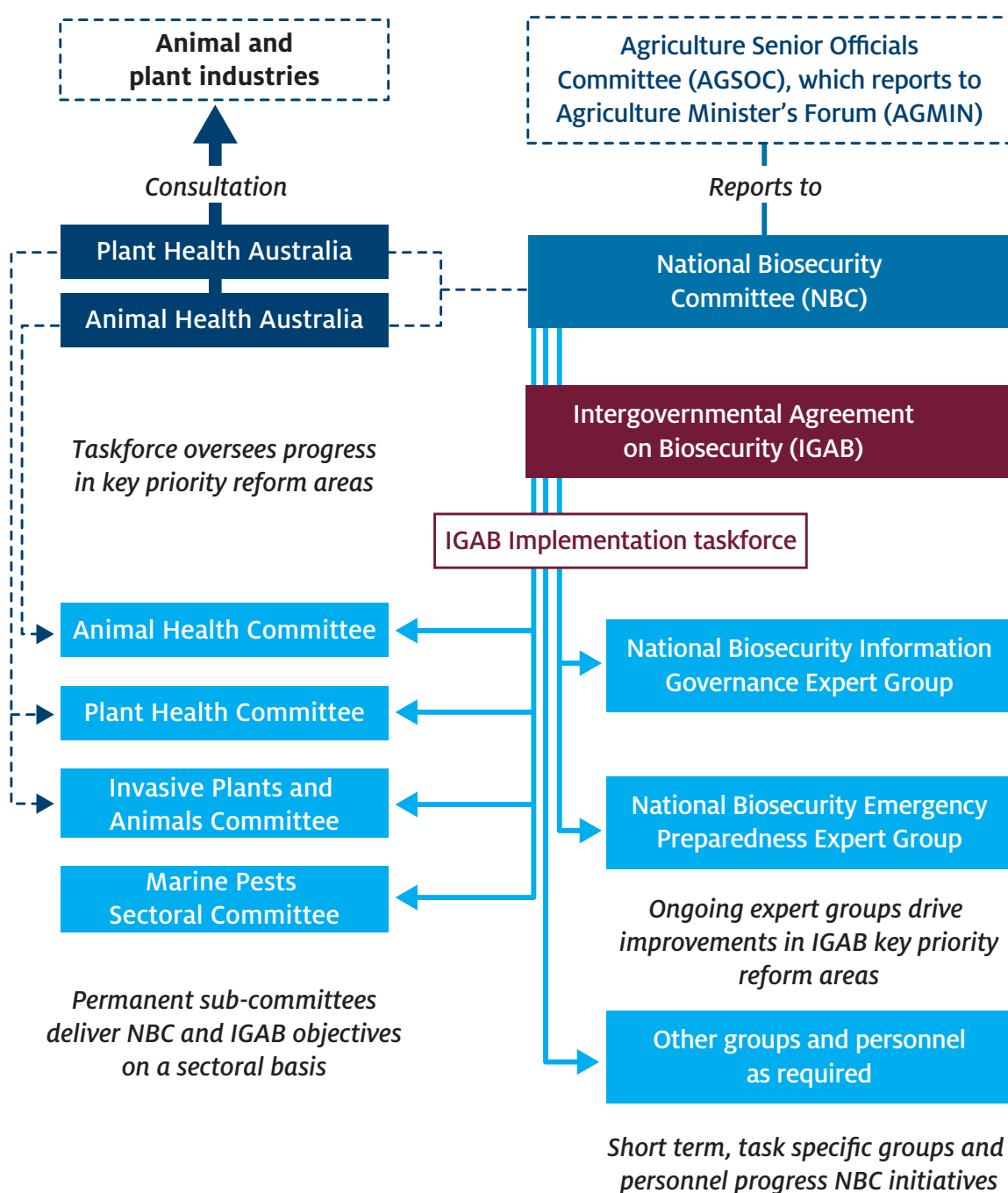
The Intergovernmental Agreement on Biosecurity

Ongoing collaboration and co-investment in Australia's national biosecurity system underpins its success. There is a range of mechanisms in place, and in contemplation, to advance collaboration on biosecurity activities and challenges among key partners and stakeholders. For governments, the primary collaboration mechanism is the Intergovernmental Agreement on Biosecurity (IGAB). Creation of such an agreement was recommended by the Beale Review in 2008 (Beale et al. 2008).

The current IGAB is the first of its type and came into effect in January 2012. It is an agreement between the Commonwealth and all state and territory governments, except Tasmania. The agreement aims to strengthen the working partnerships between governments, improve the national biosecurity system and minimise the impact of pests and diseases on Australia's economy, environment and the broader community. It details national goals, objectives and principles for the national biosecurity system; outlines key components and features of the system; and, details over 40 priority areas for reform by governments in the accompanying schedules.

The National Biosecurity Committee (NBC) is the overseeing body tasked with identifying and implementing collaborative projects to meet the national priorities identified in the IGAB. Membership of the NBC consists of senior representatives of agriculture and environment departments from each jurisdiction. The NBC has established an IGAB Implementation Taskforce to track progress undertaken by its sectoral committees, expert groups and task-specific working groups.

The arrangements supporting the IGAB, including the NBC and the IGAB Implementation Taskforce, are illustrated in Figure 2.

FIGURE 2 Arrangements supporting the IGAB

Governments have published details of significant achievements and outputs since 2012 against the priority areas identified in the IGAB schedules—mostly in the form of policy or decision-making frameworks by governments. The National Environmental Biosecurity Response Agreement (NEBRA) was the first deliverable under the IGAB. Further information on key IGAB achievements can be found [at Biosecurity Partnerships](#) on the Australian Government Department of Agriculture and Water Resource's website.

The 2012 IGAB was ambitious in what it set out to achieve, not necessarily matched by the available resources. As a consequence, governments have identified that a number of IGAB priorities remain to be fully addressed. These have been consolidated into six priority areas:

1. National decision making and investment
2. National emergency preparedness and response
3. Established pests and diseases of national significance
4. Surveillance and diagnostics
5. Information management, and
6. Communications and engagement.

The most complex and challenging priorities are those related to national decision making and investment, including: addressing gaps in existing emergency response arrangements; identifying sustainable funding mechanisms to allow non-government contributions; managing long-term containment programs; and, developing a national biosecurity investment framework. Some of these challenges are discussed in this paper.

While many of the priorities and products from IGAB will necessarily be for governments to advance, industry and the broader community have an interest in what is being progressed under the agreement. Concerns have been raised over the level of engagement with industry and the broader community by governments in both the construct of the IGAB in 2012, and subsequent implementation of the priority reform areas (the schedules). The review panel is aware that some stakeholders are seeking more direct involvement in IGAB implementation and decision-making, beyond that of emergency response deed arrangements.

The review panel is interested in your views on the suitability of the IGAB to underpin the national biosecurity system in the future, and practical suggestions for possible ways to increase stakeholder involvement in, and contribution to, IGAB activities—in keeping with the system's underlying concept of shared responsibility.

Question 1

Is the IGAB a suitable mechanism to underpin Australia's national biosecurity system in the future (10 or 20 years from now)? Are the consolidated priority areas still appropriate?

Question 2

What are your views on the construct, effectiveness, and transparency of the IGAB?
Please provide examples.

Question 3

What practical improvements to the IGAB and/or its structure would provide for an increased, but accountable, role for industry and the broader community?

Agreeing to objectives, risks and priorities

The goal and objectives of the national biosecurity system are articulated in the IGAB. The goal of the national biosecurity system is to minimise the impact of pests and diseases on Australia's economy, environment and the broader community. To achieve this goal resources are targeted to manage risks across the system (pre-border, at the border and onshore), while facilitating trade and the movement of animals, plants, people, goods, vectors and vessels to, from and within Australia.

Three objectives support the goal of the national biosecurity system. These are providing arrangements, structures and frameworks that:

1. reduce the likelihood of exotic pests and diseases, which have the potential to cause significant harm to the economy, the environment, and the community (including people, animals and plants), from entering, becoming established or spreading in Australia
2. prepare and allow for effective responses to, and management of, exotic and emerging pests and diseases that enter, establish or spread in Australia, and
3. ensure that (where appropriate) significant pests and diseases already in Australia are contained, suppressed or otherwise managed.

The review panel is interested in your views on whether the current goal and objectives of the national biosecurity system are still appropriate to continue to meet the needs of the system and all of its stakeholders—governments, industry, and the broader community—in a changing and complex global biosecurity environment

Question 4

Is the goal, and are the objectives, of Australia's national biosecurity system still appropriate to address current and future biosecurity challenges?

Identifying, managing and continually assessing biosecurity risks and priorities is challenging and complex. Australia's biosecurity environment is constantly changing due to an increasing number of risks and changing nature of those risks. This state of constant change is caused by a multitude of interrelated factors. For example, accelerating globalisation has led to a significant increase in the volumes of trade and travel, providing an increased number of pathways for potential pest and disease incursions to occur; climate change has made many environments (terrestrial and aquatic) more susceptible to pest and disease incursions, and has increased the range of a widening array of potential pest and disease threats; and, the development of Australia's north will also bring future biosecurity challenges.

In its 2014 report, *Australia's Biosecurity Future: preparing for future biological challenges*, the CSIRO identifies a number of global trends that will result in significant change and increased complexity of biosecurity challenges for Australia in the future. This includes trends relating to agricultural expansion and intensification, urbanisation and changing consumer expectations, global trade and travel, biodiversity pressures, and declining government resources. The report highlights that the intersection of these trends could lead to a future situation where existing biosecurity processes and practices are not sufficient (CSIRO 2014).

Identifying current and future biosecurity risks and priorities is only half of the equation. In an environment of constrained and finite resources there is a fundamental need to ensure that every dollar invested in biosecurity yields the greatest return possible. The ordering of risks and priorities, and undertaking biosecurity activities in a strategic and coordinated way is essential to achieving maximum return on investment.

Question 5

In order of importance, what do you see as the most significant current and future biosecurity risks and priorities for Australia and why? Are Australia's biosecurity objectives appropriately tailored to meet these risk and priorities?

The Australian and state and territory governments are responsible for priority setting within their respective areas of responsibility, in consultation with stakeholders. This is typically articulated through either a biosecurity strategy or biosecurity policy.

Currently, there is no national policy statement or national strategy for the biosecurity system agreed by governments, industry and the broader community. However, it has been suggested that the IGAB has taken on the role of a 'quasi-national strategy'.

At the Commonwealth, state and territory level most jurisdictions have, or have had in place previously, a biosecurity strategy or biosecurity policy. However, these policy documents vary in their areas of focus and level of complexity. This can lead to inconsistent treatment of the components and functions of the biosecurity system and can also lead to duplication of effort.

The review panel is interested in your views on current and future national policy directions.

Question 6

Are the components and functions of Australia's national biosecurity system consistently understood by all stakeholders? If not, what could be done to improve this?

Question 7

What benefits (or impediments) are there in realising a more integrated national approach to biosecurity, agreed to by key partners in Australia's national biosecurity system?

Question 8

What form would this best take (for example, a national statement of intent or national strategy)? What are the key elements that must be included? What specific roles do you see industry and the broader community playing in such an initiative?

Embedding shared responsibility

Each year an ever-increasing number of people, products, vessels and aircraft move in and out of Australia. The national biosecurity system protects many important components of the Australia's economy—such as its primary production systems, its unique natural environments and the health and wellbeing of its citizens—from biosecurity risks created by these activities. This can only be achieved through the collaborative efforts of governments, industry and the broader community in identifying and managing biosecurity risks.

Biosecurity is a shared responsibility. All stakeholders in the national biosecurity system—governments, industry and the broader community—have an important role to play, including in maintaining Australia's favourable biosecurity status. In some cases, the responsibility of individual stakeholders in the national biosecurity system is determined by the Australian Constitution and legislation (Commonwealth and state and territory governments), or through agreements and consultation (industry and the broader community).

Australian governments work with industry, producers and the broader community to manage biosecurity in a number of ways including: emergency planning and preparedness; surveillance and diagnostics for the early detection of exotic and emerging pests and diseases; and, management of established pests and diseases. The IGAB is the primary mechanism by which governments formally collaborate on biosecurity matters. While industry and community stakeholders are not signatories to the IGAB, they nevertheless have a direct role to play in many of the outcomes governments seek to achieve.

Industry represents its producers, logistic and supply chains, exporters and importers, and other relevant commercial entities, and has a vital role to play in the management of biosecurity risks. Government-industry partnerships such as Animal Health Australia and Plant Health Australia facilitate a national approach to enhancing Australia's animal and plant biosecurity systems through preparedness and emergency response management. However, capturing all of industry can be difficult despite, and perhaps due to, the existence of numerous industry representative and state farming organisations across Australia.

Community understanding and acceptance of biosecurity risks is critical to the sustainability and operation of the national biosecurity system. Australian governments and industry work together to help the broader community, which includes landholders, travellers, scientists and non-government organisations, understand what biosecurity means for them so as to encourage participation and confidence in the national biosecurity system.

The system operates at its most effective when stakeholders are aware of each other's roles and responsibilities and are working collaboratively toward achieving agreed outcomes.

Question 9

Are the roles and responsibilities of stakeholders in Australia's national biosecurity system clearly and consistently understood? How might this be improved?

The concept of shared responsibility is not new. The idea that all stakeholders in the national biosecurity system have an important role has its origins in the 1996 Nairn review of Australia's then quarantine system (Nairn et al. 1996), some 20 years ago. However, the application of this concept has not translated into broadly based arrangements, characterised by wide understanding and acceptance of shared responsibility, across the national biosecurity system. In some cases, 'shared responsibility' has been viewed as a vehicle to 'cost-shift' activities to other stakeholders in the system.

Although many stakeholders are already engaged in a variety of biosecurity related activities, there are opportunities to further strengthen the involvement of industry and the broader community in the national biosecurity system. In an environment of constrained and finite resources and constantly changing biosecurity challenges, there is a fundamental need for all stakeholders to recognise the true partnership approach required to manage biosecurity risks in Australia—to ensure the national biosecurity system remains strong, and our international reputation for safe and high-quality produce is maintained into the future.

The review panel is interested in your views on what actions stakeholders, including by governments, can undertake to embed the reality of shared responsibility in the national biosecurity system.

Question 10

What practical actions do you think governments and industry organisations can undertake to strengthen the involvement of industry and community stakeholders in Australia's national biosecurity system? Would increased involvement in decision making on and implementation of biosecurity activities help the adoption of shared responsibility?

Funding biosecurity

The success of the national biosecurity system is reliant on sustained levels of well-targeted investment over time, underpinned by strong funding principles and arrangements that are nationally coordinated, consistently applied and well communicated. The IGAB includes these investment principles for biosecurity activities:

1. Activity is undertaken and investment is allocated according to a cost-effective, science-based and risk-management approach, prioritising the allocation of resources to the areas of greatest return.
2. Relevant parties contribute to the cost of biosecurity activities:
 - a. Risk creators and risk beneficiaries contribute to the cost of risk management measures in proportion to the risks created and/or benefits gained (subject to the efficiency of doing so), and
 - b. Governments contribute to the cost of risk management measures in proportion to the public good accruing from them.
3. Governments, industry and other relevant parties are involved in decision making, according to their roles, responsibilities and contributions.

The review panel is interested in your views on these principles, and whether they remain appropriate to meet current and future needs of the national biosecurity system.

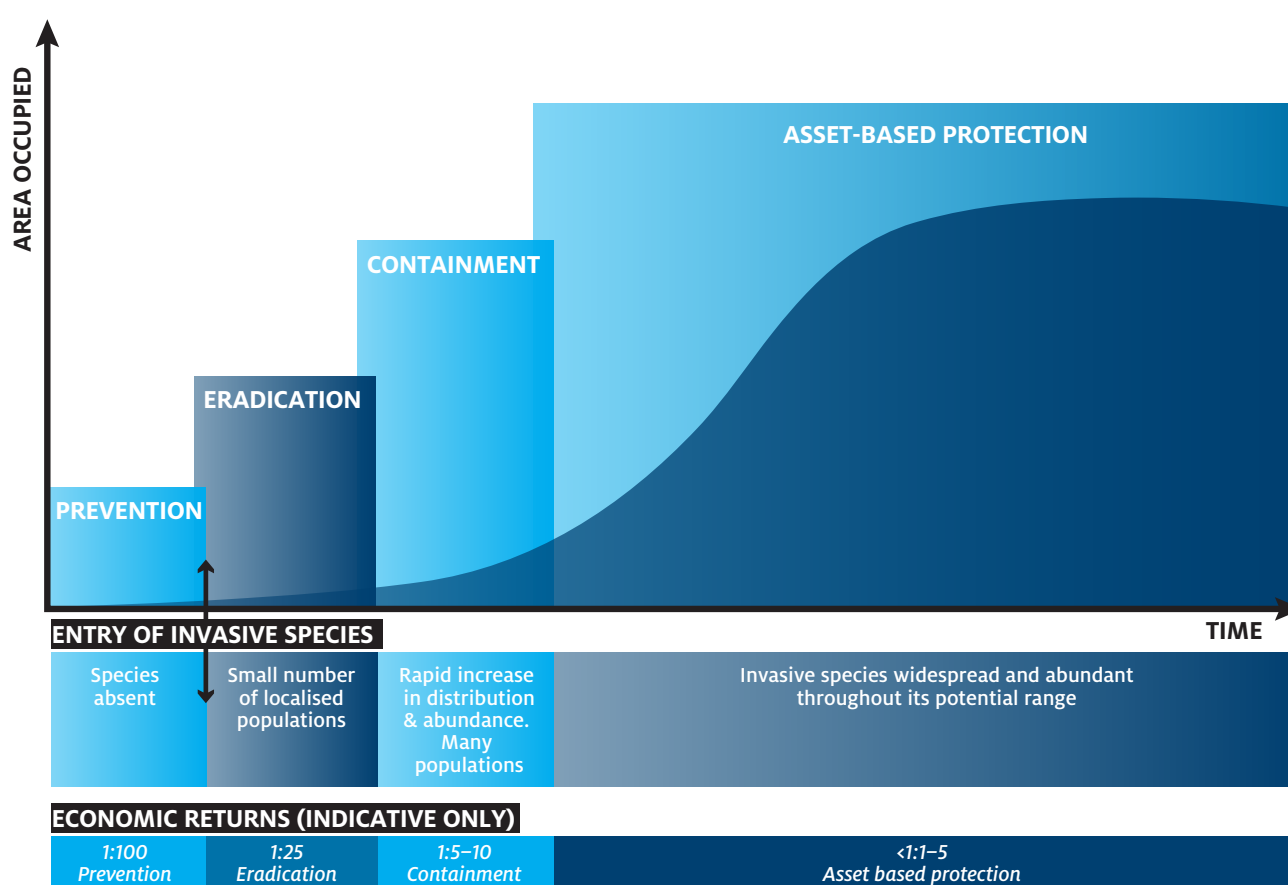
Question 11

Are the IGAB investment principles still workable? Do they still meet the needs of Australia's national biosecurity system now and in the future?

The review panel recognises that core biosecurity activities are facing ongoing funding pressures and governments and industry partners are facing significant increases in associated management costs. Recent reports have identified that reductions to core government biosecurity resourcing—overall financial and staffing levels—across all levels of government is placing further pressures on the national biosecurity system to manage biosecurity risks (Brooks et al. 2015, Commonwealth of Australia 2015 and VAGO 2015).

The generalised (or biological) invasion curve (GIC) (Figure 3) is a useful tool to help governments, industry and the broader community consider where to best place resources and help inform investment decisions, providing value for money and optimal return on the investment. The broad categories of action and investment are prevention, eradication, containment and asset-based protection (management).

FIGURE 3 The generalised (or biological) invasion curve



Source: Victorian Department of Environment and Primary Industries.

In general, Australian Government investment is focused more toward prevention, and state and territory government investment more toward asset-based protection (management) activities. The return on investment is higher for prevention, preparedness and early detection surveillance (for exotic pests and diseases) than for ongoing management of established pests and diseases. For the latter, return on governments' investment is improved when their investment supports collective industry and/or community action (compared to government as sole investor). Additionally, traditional patterns of investment can sometimes be driven by industry and political imperatives.

In an environment of constrained and finite government resources—and to ensure a strong national biosecurity system—it is imperative that investment decisions result in an optimal return on investment. The review panel is interested in your views on how government investment in biosecurity activities can be best targeted, and what can be done to ensure investment decisions align with agreed priorities.

Question 12

Are governments and industry investing appropriately in the right areas? Are there areas where key funders should be redirecting investment? Can investment in biosecurity activities be better targeted? If so, how? Please provide examples.

Question 13

How do we ensure investments and investment frameworks align with priorities, while being flexible enough to address changing risks and priorities?

Governments have a unique funding role in some biosecurity activities. This role is recognised, for example, in the National Emergency Biosecurity Response Agreement (NEBRA), which provides for responding to emergency incidents that primarily impact the environment and/or social amenity and where the response is for the public good. Under the NEBRA, the cost of response activities is borne solely by governments—50 per cent by the Commonwealth, with the remaining 50 per cent apportioned between affected states and territories.

Governments, however, are not the only funding contributors to the national biosecurity system and its activities. While core government funding is integral to a strong biosecurity system, contributions come through various other means, such as:

- fees and charges (for example, fee-for-service charges)
- industry rates, levies or charges (for example, commodity-based levies)
- landholder rates, levies or charges (for example, levies for NSW Local Land Services activities)
- other contributions (for example, contributions from recreational fishers or users of national parks), and
- accredited industry certification schemes that include biosecurity.

For certain biosecurity activities (such as emergency responses) some industries have agreed highly detailed and specific cost-sharing arrangements where costs are shared by governments and industry. These are the Emergency Animal Disease Response Agreement (EADRA) and the Emergency Plant Pest Response Deed (EPPRD).

Under the EADRA and EPPRD, the share of costs to be borne by industry and governments to implement response plans varies from 100 per cent government funding to 20 per cent government and 80 per cent industry funding—depending on the extent to which the disease or pest affects the environment, human health and national trade interests or specific industry assets. However, while these are formal arrangements for emergency responses and cover more than funding, not all industries are represented.

There are many beneficiaries of the national biosecurity system, covering industry, community members, international visitors and numerous other sectors of the economy. However, these stakeholders benefit in different ways. The benefits received vary by stakeholder group and can be a mix of tangible and intangible, quantifiable and unquantifiable. For example, the Australian Bureau of Agricultural and Resource Economics and Sciences estimates that the financial benefit attributable to biosecurity activities for Australian primary producers is between \$12 000 and \$17 500 per farm through avoiding costs and losses such as direct production losses, additional costs for control or mitigation, and reduced export earnings (Hafi et al. 2015). Further work may be required to quantify the value of the national biosecurity system to other beneficiaries.

In summary, some funding pressures may be the result of reduced investment over time (underinvestment), inefficient spending of funding (misplaced investment) or the result of risk creators and beneficiaries not being captured (missed investment)—risk creators can be difficult to identify. The review panel is interested in your views as to whether current biosecurity funding arrangements are still appropriate to meet the needs of the national biosecurity system, and what can be done to facilitate equitable investment from all stakeholders across the system.

Question 14

Are current biosecurity funding arrangements still appropriate to meet the needs of Australia's national biosecurity system, now and in the future? What might an alternative or novel funding model encompass?

Question 15

What can be done to ensure an equitable level of investment from all stakeholders across Australia's national biosecurity system, including from risk creators and risk beneficiaries?

Market access

The national biosecurity system plays an important role in supporting many important components of the Australia's economy, including agriculture, tourism, the environment and international trade. For example, in 2014–15 Australia's gross value of agricultural production is estimated to be around \$53.6 billion (ABS 2016), with the value of farm exports around \$43.9 billion (ABARES 2016)—the value of exports is well over three quarters of what is produced. Australian producers are heavily reliant on farm exports to underpin their livelihoods.

Australia's island geography combined with effective biosecurity measures has historically seen the nation remain free of many significant pests and diseases that adversely affect access to international markets for many other countries. In addition, effective control programs have seen Australia eradicate (for example, brucellosis and tuberculosis), or establish identified zones and controls for pests and diseases (for example, Bluetongue virus) that were or are endemic or which have caused emergency pest and disease incursions (for example, cucumber green mottle mosaic virus).

This gives Australia's primary producers a competitive advantage in relation to other countries which do not enjoy as favourable a pest and disease status.

By maintaining a strong national biosecurity system Australia is able to obtain preferential market access arrangements that reflect the nation's favourable animal and plant health status for industry and Australia's primary producers. This includes being able to obtain recognition of pest and disease freedom, controls such as zonal freedom for endemic pests and diseases, the use of treatments that minimise damage to products, and recognition of the effectiveness of the national biosecurity system (including government regulation and industry co-regulatory arrangements) in meeting importing country market access requirements. This should be seen as a key benefit flowing from our national biosecurity policies.

Australia's agricultural sector has many opportunities on the horizon. These will come from realising benefits from recently signed free trade agreements with China (ChAFTA), Japan (JAEPA), Republic of Korea (KAFTA) and Trans-Pacific Partnership countries (TPP Agreement), and in advancing other market access opportunities for Australian products. We will need to capitalise on these opportunities while ensuring our international reputation is maintained.

Question 16

Are market access considerations given appropriate weight in Australia's national biosecurity system? What other considerations also need to be taken into account?

Question 17

Are there ways governments could better partner with industry and/or the broader community to reduce costs (without increasing risk), such as industry certification schemes?

Australia has long-standing surveillance systems, which include robust diagnostic systems and capacity, for many pests and diseases where these can affect trade. Many of these operate through cooperative programs overseen by the Australian, state and territory governments and relevant industry organisations. In response to the increasing sophistication of many of Australia's trading partners' biosecurity systems, it can be expected that the surveillance and diagnostic systems will require continual enhancement and review to ensure they continue to deliver outcomes that underpin existing and future market access arrangements.

Question 18

How can the capacity and capability of surveillance systems (including diagnostic systems) underpinning Australia's national biosecurity system be improved?



The role of research and innovation

Smarter and more innovative ways of undertaking biosecurity activities will be needed to ensure a robust and affordable national biosecurity system now and into the future. There are numerous opportunities to develop and adopt innovative methods and technologies. For example, finding different and more effective ways to use existing practices or technologies, or developing entirely new practices or technologies.

For biosecurity, research and innovation has an important role to play in further developing areas such as surveillance and response, data-sharing, and analysis. Autonomous systems, robotics and next-generation sensors all offer great potential to strengthen biosecurity-related activities. Potential innovations could include:

- sensor-enhanced surveillance systems (such as smart traps and remotely piloted aircraft)
- multi-functional technology (such as a single monitoring system to detect multiple pests and diseases)
- versatile smartphone applications to identify and record, and transfer suspected pest or disease information
- advanced diagnostic systems to help understand potential future diseases and pathogens, and
- technologies for market access assurance, including alternative treatment methods.

The review panel is interested in your views on research and innovation in the national biosecurity system and the areas—pre-border, border and/or onshore—that would benefit from innovative practices and/or technologies.

Question 19

Which specific areas of Australia's national biosecurity system could benefit from research and innovation in the next five, 10 and 20 years and why? Please provide examples.

There are various organisations that play a role in facilitating or conducting biosecurity-related research. Particular consideration must be given to the role that joint government and industry-funded organisations play, namely Animal Health Australia (AHA), Plant Health Australia (PHA), the Rural Research and Development Corporations and relevant Cooperative Research Centres. These organisations play a major role in facilitating and prioritising work undertaken by research provider organisations, such as universities, the CSIRO and other government agencies. The review panel is aware of views that biosecurity-related research and development activities could be more efficient, effective and better coordinated.

There are two main national biosecurity strategies that guide activities and investment in biosecurity-related research and innovation. These are the Animal Biosecurity RD&E Strategy and the Plant Biosecurity RD&E Strategy. AHA and PHA are tasked with coordinating the implementation of their respective strategies on behalf of industry and government stakeholders.

Broadly, these strategies establish a high-level vision and detail the goals, outcomes, priorities and objectives for research, development and extension activities. These strategies are in place to ensure research activities are undertaken in a targeted and coordinated way.

Question 20

How can coordination of biosecurity-related research and innovation activities be improved?

Implementing new technologies and non-traditional ways of operating may allow for smarter investment decisions and more efficient allocation of resources across the system, including investment across the generalised invasion curve. The review panel is interested in your views on the role of innovation in improving the cost-effectiveness of the national biosecurity system.

Question 21

How can innovation (including technology) help build a more cost-effective and sustainable national biosecurity system?

Measuring the performance of the national biosecurity system

Australia's national biosecurity system is highly complex with many interrelated components. This makes measuring the system's performance and overall success fundamentally difficult. However, performance measurement is also critical for making informed judgements about whether biosecurity activities are achieving their stated goals and objectives—and that the system as a whole is meeting its national goal and objectives.

Performance data can support and better direct investment decisions, identify key risk areas within the system, and improve the management and efficiency effectiveness of existing risks and operations. Across the national biosecurity system, there are many elements that can be measured, covering inputs (for example, the staff allocated to tasks or the dollars spent), outputs (for example, the passengers or containers cleared or the quality or value of the produce exported) or outcomes (for example, a pest or disease managed, or access to a market retained, improved or gained). Data is also collected through the many programs that monitor specific pests and diseases. In the absence of appropriate data, qualitative assessments and expert opinion are accepted means of 'filling in the gaps'.

The general view of governments, industry and the broader community appears to be that the national biosecurity system is operating appropriately. There are specific analyses and data sets available to support Australia's claims about its system, including to trading partners. For example, to demonstrate the presence, absence or containment (zoning) of various pests and diseases of concern, and/or the resources employed across the system.

While governments and industry collect, or have access to, a range of data and measurements, it is unclear how comprehensive and standardised these are across the states and territories and across industries—as there is no central point for coordination and analysis. This serves to limit, in an overall sense, our knowledge and understanding of what useful data and information exists and what might be needed in order to develop a full, national and longer-term picture of the performance and success of the system.

Finally, performance measurement and assessment must also be, of itself, a cost-effective activity. If the aim is to develop a ‘fit for purpose’ performance framework that provides the required national performance information for key decision-making and reporting purposes, this will also require a commitment to sustained effort and resourcing from biosecurity partners and stakeholders, well into the future.

Question 22

What does success of Australia’s national biosecurity system look like? How could success be defined, and appropriately measured (that is, qualitatively or quantitatively)? What, if any, measures of success are in use?

Question 23

What would be required to ensure data collection and analysis meets the needs of a future national biosecurity system? Who are the key data and expert knowledge holders in the national biosecurity system?

Question 24

How can existing or new data sets be better used? How might data be collected from a wider range of sources than government?



Consolidated list of questions

The IGAB

1. Is the IGAB a suitable mechanism to underpin Australia's national biosecurity system in the future (10 or 20 years from now)? Are the consolidated priority areas still appropriate?
2. What are your views on the construct, effectiveness, and transparency of the IGAB? Please provide examples.
3. What practical improvements to the IGAB and/or its structure would provide for an increased, but accountable, role for industry and the broader community?

Agreeing to risks, priorities and objectives

4. Is the goal, and are the objectives, of Australia's national biosecurity system still appropriate to address current and future biosecurity challenges?
5. In order of importance, what do you see as the most significant current and future biosecurity risks and priorities for Australia and why? Are Australia's biosecurity objectives appropriately tailored to meet these risk and priorities?
6. Are the components and functions of Australia's national biosecurity system consistently understood by all stakeholders? If not, what could be done to improve this?
7. What benefits (or impediments) are there in realising a more integrated national approach to biosecurity, agreed to by key partners in Australia's national biosecurity system?
8. What form would this best take (for example, a national statement of intent or national strategy)? What are the key elements that must be included? What specific roles do you see industry and the broader community playing in such an initiative?

Embedding shared responsibility

9. Are the roles and responsibilities of stakeholders in Australia's national biosecurity system clearly and consistently understood? How might this be improved?
10. What practical actions do you think governments and industry organisations can undertake to strengthen the involvement of industry and community stakeholders in Australia's national biosecurity system? Would increased involvement in decision making on and implementation of biosecurity activities help the adoption of shared responsibility?

Funding biosecurity

11. Are the IGAB investment principles still workable? Do they still meet the needs of Australia's national biosecurity system now and in the future?
12. Are governments and industry investing appropriately in the right areas? Are there areas where key funders should be redirecting investment? Can investment in biosecurity activities be better targeted? If so, how? Please provide examples.

13. How do we ensure investments and investment frameworks align with priorities, while being flexible enough to address changing risks and priorities?
14. Are current biosecurity funding arrangements still appropriate to meet the needs of Australia's national biosecurity system, now and in the future? What might an alternative or novel funding model encompass?
15. What can be done to ensure an equitable level of investment from all stakeholders across Australia's national biosecurity system, including from risk creators and risk beneficiaries?

Market access

16. Are market access considerations given appropriate weight in Australia's national biosecurity system? What other considerations also need to be taken into account?
17. Are there ways governments could better partner with industry and/or the broader community to reduce costs (without increasing risk), such as industry certification schemes?
18. How can the capacity and capability of surveillance systems (including diagnostic systems) underpinning Australia's national biosecurity system be improved?

The role of research and innovation

19. Which specific areas of Australia's national biosecurity system could benefit from research and innovation in the next five, 10 and 20 years and why? Please provide examples.
20. How can coordination of biosecurity-related research and innovation activities be improved?
21. How can innovation (including technology) help build a more cost-effective and sustainable national biosecurity system?

Measuring the performance of the national biosecurity system

22. What does success of Australia's national biosecurity system look like? How could success be defined, and appropriately measured (that is, qualitatively or quantitatively)? What, if any, measures of success are in use?
23. What would be required to ensure data collection and analysis meets the needs of a future national biosecurity system? Who are the key data and expert knowledge holders in the national biosecurity system?
24. How can existing or new data sets be better used? How might data be collected from a wider range of sources than government?

5 Making a submission

Please read the discussion paper and consider the questions posed before making a submission. In your submission include responses to the questions asked and provide examples (as appropriate).

Submissions can be made in one of two ways:

- By lodging an online submission of up to 500 words using the [online form](#), or
- By lodging a written submission. Written submissions must be accompanied by a completed [cover sheet](#) and emailed to igabreview@agriculture.gov.au.

A written submission can be a short letter or a more detailed document. There is no limit on the length of a written submission. However, if the written submission is more than three (3) pages in length, please also include a summary of your key comments and suggestions.

If you have any questions about the review or the submission process, contact the IGAB Review Taskforce on 1800 833 507 between 8.30 am and 5 pm AEST on business days.

Publication of submissions

Submissions will be published on the department's [Intergovernmental Agreement on Biosecurity Review](#) web page, unless you request otherwise. If you want your submission treated as confidential, in full or in part, indicate clearly on the front page.

The Australian Government reserves the right to refuse to publish submissions, or parts of submissions, which contain offensive language, potentially defamatory material or copyright infringing material. A request may be made under the *Freedom of Information Act 1982* for a submission marked confidential to be made available. Such requests will be determined in accordance with provisions under that Act.

Personal information provided by you in your submission will be used by the department for the purposes of the review. Contact information, other than your name and organisation (if applicable) will not be published. Your name and organisation will be included on the department's website to identify your submission. See the department's [privacy policy](#) to learn more about how the department collects, uses and stores personal information.

Where you provide personal information about an individual other than yourself, you must ensure that you notify the individual that you have provided their personal information to the department, make that person aware of this privacy notice and draw their attention to the department's privacy policy.

Appendix A: Review panel biographies

Dr Wendy Craik AM (Chair)

Dr Craik is recognised as one of Australia's leading independent public policy advisors, particularly on issues related to natural resource management. She is currently Chair of the Climate Change Authority, Deputy Chancellor for the University of South Australia (2010–2018), Chair of the NSW Marine Estate Management Authority and Member Advisory Board for the Centre for Strategy and Governance.

She has an extensive record of executive level appointments in both public and private sectors, most recently as a Commissioner of the Productivity Commission (2009–2014). Prior to this, Wendy was CEO of the Murray Darling Basin Commission (2004–2008) and Executive Director of the National Farmers' Federation (1995–2000). Other previous roles include President of the National Competition Council, board member for Dairy Australia, Chair of the Australian Rural Leadership Foundation, Chair of the Australian Fisheries Management Authority and Chair of the National Rural Advisory Council.

Mr David Palmer

Mr Palmer is currently the Chair of the NSW Biosecurity Advisory Committee, the NSW Seasonal Conditions Advisory Committee, the Livestock Biosecurity Network and the NSW Rural Assistance Authority Board. Mr Palmer is also an independent director on the Board of Animal Health Australia, the Invasive Animals CRC and the Greater Sydney Local Land Services.

He is the former Managing Director of Meat and Livestock Australia and spent 6 years as the Executive Director of the Cattle Council of Australia. Other previous work includes with the Australia-Korea Foundation, NSW Meat Industry Authority, the NSW Farmer's Association, and the Australian Meat & Livestock Corporation.

Dr Richard Sheldrake AM

Dr Sheldrake is the Former Director General of the New South Wales Department of Primary Industries. Prior to this appointment Dr Sheldrake had been Director-General of the NSW Departments of Industry and Investment, Natural Resources and Agriculture. He has led the various departments in service delivery, policy development, compliance and regulation, research and development and technology transfer across a broad range of fields.

Dr Sheldrake has played a role in developing and guiding state and national policy in areas such as carbon offsets; plant and animal biosecurity; agricultural research and development; drought policy; rural and regional service delivery, native forest management; native vegetation; fisheries resource management; efficient water use; sustainable land use; and, export market development.

He has previously held the offices of Commissioner of the Murray Darling Basin Commission, NSW Commissioner for Soil Conservation and NSW Commissioner of Forests. Dr Sheldrake was previously a Director of the Pig Research and Development Corporation and Animal Health Australia Limited and Chair of the Primary Industries Health Committee.

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