

ATTACHMENT A – AUSTRALIAN GOVERNMENT SUBMISSION TO THE IGAB REVIEW

Australia's biosecurity system is designed to manage the risk of pests and diseases entering, emerging, establishing or spreading in Australia and causing harm to human, animal or plant health, the economy, the environment or the community. The growth in global food demands and markets, and the increased movement of goods, vessels and people around the world are some of the many global changes which are likely to have a significant impact on Australia's biosecurity system.

The Australian Government undertakes a range of activities to anticipate, prevent, prepare for, respond to, detect and mitigate biosecurity risks and threats, and respond, recover and adapt to biosecurity incidents. These activities are undertaken offshore, at the border and also onshore in partnership with state and territory governments, industry and the Australian community. Biosecurity activities not only protect the environment and industry from pests and diseases, but also protect the ability to export Australian products to international markets. Australia's biosecurity system relies on a targeted, risk-based approach supported by research, science and information.

Australia's biosecurity system provides a range of benefits including:

- reducing the cost of agricultural production
- reducing the impact of pests and diseases on our environment and biodiversity (including associated negative impacts on agricultural productivity and social amenity)
- safeguarding the health of our community
- supporting animal and plant health
- supporting a profitable agricultural industry through improving and maintaining market access.

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?

The IGAB remains a suitable mechanism to underpin Australia's national biosecurity system. The IGAB provides the foundation for collaborative action between the Australian Government and state and territory governments to address a broad range of biosecurity issues. The IGAB recognises and prioritises the principle of shared responsibility, clarifies roles and responsibilities and establishes a nationally agreed approach to address biosecurity risks. While biosecurity risks may change and evolve over time, the IGAB provides the framework for a strong, flexible and collaborative national biosecurity system, which is aimed at addressing current and future biosecurity challenges, while still supporting market access. The IGAB is also a publicly available framework that provides information to all stakeholders on the current government biosecurity priority areas.

The IGAB also creates the authorising environment for the National Biosecurity Committee (NBC), the governing body tasked with identifying and implementing collaborative projects to meet the national priorities identified in the IGAB. Like the IGAB, the NBC is primarily a forum for collaboration between the Australian Government and state and territory governments and in this capacity is an effective body to support the implementation of the IGAB. Although Tasmania is not a signatory to the IGAB, the Tasmanian Government has worked collaboratively with signatory governments.

The NBC provides advice to the Agriculture Senior Officials Committee (AGSOC) and the Agriculture Ministers' Forum (AGMIN) on national biosecurity. The NBC is supported by four sectoral committees that provide policy, technical and scientific advice on matters affecting their sector, covering all pests and disease risks to the terrestrial and aquatic (inland water and marine) animals and plants, and the environment:

- Animal Health Committee
- Plant Health Committee
- Invasive Plants and Animals Committee
- Marine Pest Sectoral Committee.

These sectoral committees are in turn supported by a number of sub-committees and expert working groups. It is suggested there could be better coordination and linkages between the committees and sub-committees to ensure greater transparency, information-sharing and cross-sectoral utilisation of the work being produced.

As discussed in response to Question 2 below, the suitability of the IGAB must be considered in the context of its role as an agreement between governments. The IGAB does not provide a means to adequately address the need to engage with industry and other stakeholders in implementing the national biosecurity system. However, this relationship between government and stakeholders within the national biosecurity system is important and should be captured through other mechanisms, rather than seeking to amend the primary purpose of the IGAB. The IGAB, as an agreement between governments, is an important tool to collaborate on the management of the national biosecurity system.

The current IGAB priority areas, as identified in the Schedules to the IGAB, are appropriate to meet current national biosecurity needs. However, it is suggested that the priorities addressed in the Schedules are considered, and are reviewed regularly, to ensure their ongoing relevance. From consultation with states and territories, it appears that while the states and territories support the priority areas identified, resourcing for biosecurity and prioritising market access considerations appear to be of highest priority.

The IGAB has been an effective mechanism utilised by the Australian Government to guide investment decisions and leverage funds for priority biosecurity areas.

Question 2 - What are your views on the construct, effectiveness, and transparency of the IGAB? Please provide examples.

The IGAB remains the definitive instrument supporting the Council of Australian Governments (COAG) authorisation for the ongoing development and coordination of the national biosecurity system. The IGAB also provides the foundations for the continued strengthening of collaborative relationships between the Australian Government and state and territory governments, which is critical to a strong and effective national biosecurity system.

In early 2015, the NBC conducted an internal assessment of IGAB implementation, reporting that considerable progress has been made, and identifying priority reform areas. This highlighted that continuous review of the biosecurity system is essential to ensure that resources are allocated appropriately to reflect changing risks and priorities.

The IGAB strengthens Australia's biosecurity system by clearly setting out the roles and responsibilities of each of the parties involved in the national biosecurity system and provides the framework for progress and advancements in the area of biosecurity.

Since the commencement of the IGAB in 2012, there have been a number of significant achievements against the priority areas identified in the IGAB Schedules, including the development of:

- National Environmental Biosecurity Response Agreement sets out emergency response arrangements, including cost-sharing arrangements, for responding to biosecurity incidents that primarily impact the environment and/or social amenity and where the response is for the public good.
- National Transition Program Policy Framework for the short term management of pests and diseases following a national decision that eradication is not technically feasible or cost beneficial, enabling an orderly transition from response to ongoing management
- National Framework for Benefit Cost Analysis (BCA), and the creation of a National Core Capacity for BCA in Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)
- a framework for the management of the national surveillance and diagnostic capability
- a national policy framework for the management of Established Pests and Diseases of National Significance that provides a lead role for industry and community
- National Biosecurity Engagement and Communications Framework and the revitalisation of the Biosecurity Incident National Communications Network
- self-assessment methods that assist jurisdictions to assess and improve their emergency preparedness capability and capacity
- Exercise Odysseus, which consisted of discussion exercises and field-based activities to enhance national (government and industry) preparedness for the implementation of a national livestock standstill in response to an outbreak of foot-and-mouth disease. Exercise Odysseus took place in 2014 and early 2015, and involved over 1600 participants from government, industry and non-government organisations.

However, despite these key achievements, a number of IGAB priority reforms are yet to be completed including:

- the development of principles to guide national investment in biosecurity including national interest, national significance and investment principles
- the development of secure and sustainable biosecurity funding mechanisms
- the development of a portfolio approach to national biosecurity investment
- the enhancement of national preparedness and response capability through appropriate training, exercises, stakeholder engagement and capability assessment activities
- the implementation of the frameworks for Established Pests and Diseases of National Significance, and Surveillance and Diagnostics
- the National Biosecurity Information Governance Agreement and national minimum data standards for biosecurity data
- the development of an overarching framework to link the animal, plant and environment and community RD&E strategies.

While the IGAB has resulted in the delivery of a number of significant policies and frameworks, many of the policies and frameworks have yet to be fully or consistently implemented. The next phase of IGAB implementation would benefit from greater emphasis

on implementation of key policies and priorities to better support an effective and efficient national biosecurity system.

The IGAB could include more measurable objectives that would commit the Australian Government and state and territory governments to operationalise the IGAB principles. This would improve the transparency and accountability of the IGAB and the national biosecurity system. Transparency and accountability could be further enhanced through the IGAB requiring jurisdictions, including the Australian Government, to regularly report on the state of the Biosecurity system. Such a report would provide valuable information on the effectiveness of policies and funding while also being informative in the identification of gaps or inefficiencies and providing a basis for informing and educating the general public on biosecurity.

The IGAB has been effective in promoting the harmonisation of biosecurity legislation across jurisdictions. A continued emphasis on harmonisation of legislation and policies across jurisdictions in relation to biosecurity, while providing for jurisdictional differences to be retained, (as required) would further reduce the costs of implementing the system, streamline requirements, reduce costs and administrative burden for producers, facilitate domestic and international trade and improve the efficiency of the national biosecurity system. Improvements in harmonisation have already been achieved as a by-product of meeting commitments under the National Environmental Biosecurity Response Agreement (NEBRA), which was delivered under the IGAB. Greater harmonisation of requirements is also expected to be discussed as part of the consideration of the application of new biosecurity response powers under the Australian Government's *Biosecurity Act 2015*.

The IGAB provides a mechanism for engaging with stakeholders, specifically referring to Animal Health Australia (AHA) and Plant Health Australia (PHA). However, while this provides a basis for engagement with members of these two organisations, this does not result in all relevant producers (non-members of AHA and PHA), industries (for example, importers and transport companies) or other stakeholders (environmental organisations; community) being consulted and engaged. The IGAB, while acknowledging the need for shared responsibility and collaborative action, being an agreement between governments, does not provide a sufficient basis or framework for engagement and partnership with stakeholders. As an agreement between governments, it is not appropriate for the IGAB to be a foundation for the role of non-government stakeholders in the biosecurity system as non-government stakeholders are not signatories. There is an opportunity for the IGAB to provide a cross jurisdictional view of the role of stakeholders and how to jointly engage with them, but other mechanisms, outside of the IGAB, should also be used to solidify engagement and collaboration with a representative cross-section of stakeholders.

The National Biosecurity Engagement and Communication Framework was developed under Schedule 6 of the IGAB to improve cooperation between parties, increase stakeholder awareness, and enhance the effectiveness of biosecurity activities through communication and engagement. It assists jurisdictions to adopt a consistent approach when developing engagement and communication plans. However, there is considerable room for improvement in utilising this Schedule to more effectively engage with and educate a greater range of stakeholders and risk creators on biosecurity.

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?

The IGAB recognises that the biosecurity system is reliant upon sharing of responsibilities and committing government to principles aimed at increasing the role of stakeholders in biosecurity activity. The NBC's work plan, under the IGAB, can also be used to require development of supporting instruments that would clarify the role of the stakeholders in biosecurity to promote a commitment to sharing responsibilities.

The development of a national biosecurity statement of intent is being considered by the NBC. The development of a statement of intent would increase engagement and involvement of stakeholders in the national biosecurity system and potentially form the precursor for a national biosecurity strategy or policy statement, developed jointly by governments and stakeholders. A national statement of intent, with the buy-in and agreement of the Australian Government, states and territory governments and stakeholders would provide the basis for greater implementation of the concept of shared responsibility within the national biosecurity system.

However, such an agreement between governments and stakeholders should ensure all parties are held accountable for delivering biosecurity action. The identification and engagement of non-government, non-agricultural organisations - who would ultimately endorse such statement – will be a key challenge.

A national biosecurity strategy or policy statement would articulate agreed national policy directions, priorities and arrangements, clarify roles and responsibilities of all parties, and further embed the concept of shared responsibility. A national biosecurity strategy or policy statement would also provide an opportunity to seek and take into account the views of the diverse range of stakeholders.

Question 4 - Is the goal, and are the objectives, of Australia's national biosecurity system still appropriate to address current and future biosecurity challenges?

The Australian Government is of the view that the current goals and objectives of the national biosecurity system, as set out in clause 3 of the IGAB, are generally appropriate to meet current and future challenges.

A commitment under the IGAB to regularly undertake and report on the state of the biosecurity system would provide more information on whether the national biosecurity system is effective in achieving its goals and objectives, and whether these goals and objectives are suitable for biosecurity risks faced by Australia.

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?

A major pest and disease outbreak could devastate Australia's economy, impact on domestically produced food sources and the environment, as well as prevent trade. It could also impose significant costs on governments, industries and individuals. Changing climatic conditions mean the ranges for certain pests and diseases such as West Nile virus and Huanglongbing (citrus greening) are steadily extending. Invasive species are a global

problem that threaten both agriculture and biological diversity. In addition to new diseases, there is a significant risk associated with the rise in e-commerce, which is the buying and selling of goods and services through primarily the internet, and the associated risk of entry of pests and diseases.

Managing biosecurity risk is therefore crucial but has also become more challenging and complex over time. In Australia, over the last decade aircraft passengers has increased by 80 per cent, the number of sea containers imported has increased by 82 per cent and bulk cargo imports are up 16 per cent.

In 2014, Australian governments responded to more than 100 pest and disease detections and contributed to 11 cost-shared national eradication responses. During 2014-15, the Department of Agriculture and Water Resources assessed, screened, inspected and/or cleared approximately:

- 146 million international mail articles
- 17.9 million arriving international passengers at airports
- 600,000 arriving international passengers at seaports
- 1.7 million sea cargo consignments and
- 28.9 million air cargo consignments.

These figures continue to rise. By 2030, Australian airports are expected to handle three times as many international passengers and ports are expected to handle almost five times the volume of containerised imports (based on volumes in 2000). However, it is not just the volume that places pressure on the biosecurity system and increases the chance of a pest or disease entering Australia. The speed with which a pathogen could reach us is also increasing as goods and people arrive in Australia from increasingly diverse locations.

The ongoing growth in global food demands and markets, and increased movement of goods, vessels and people around the world are likely to present a significant challenge to the capacity and capability of Australia's biosecurity system to effectively identify and mitigate biosecurity risks. This will be particularly challenging to achieve without continually increasing resources and effort to keep pace with this growth and will require a significant focus on streamlining and optimising the allocation of finite resources and funding through:

- implementing new innovative technologies to more efficiently and effectively detect and manage biosecurity risks
- strengthening surveillance and building scientific capability
- developing investment strategies that maximise the efficiency of funding and resource utilisation
- working closely with jurisdictions, other sectors, stakeholders and the community to maximise resources and funding, share data and information, and minimise duplication and administrative burden
- identifying new sources and models of funding to ensure that the system is able to meet the demands of the future.

In 2014, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) produced a report identifying Australia's future biosecurity challenges titled 'Australia's Biosecurity Future: Preparing for future biological challenges' (available from: <https://publications.csiro.au/rpr/download?pid=csiro:EP146693&dsid=DS4>). This Report identified megatrends expected to impact biosecurity in the future such as growth in global

food demands and markets, rising agricultural pressures (e.g. water scarcity, pesticide resistance), a changing climate and shifts in ecosystem diversity, an ageing population and a decline in biosecurity specialists and experienced farmers, and the increased movements of goods, vessels and people around the world.

From the Australian Government's perspective, the key challenges include:

- effectively implementing the principle of shared responsibility to improve the implementation of the national biosecurity system
- streamlining and optimising the allocation of finite resources and funding across an expanding biosecurity system
- improving data collection and information sharing within governments and between governments and industry
- accurately evaluating the quality and effectiveness of Australia's biosecurity system
- communicating the successes of Australia's biosecurity system
- supporting innovation, sustainable development and research and development in biosecurity
- ensuring that environmental issues are adequately considered at all stages of the biosecurity system
- operating effectively in an increasingly tight fiscal environment
- meeting the increasing demands on biosecurity posed by internet sales of products that have the potential to result in the entry of plant or animal pests or diseases
- addressing and managing the challenges associated with climate change
- having the capacity and capability to manage large incidents such as an outbreak of foot and mouth disease.

There may be value in the objectives being re-considered to prioritise the need for improved capacity and capability to anticipate future biosecurity challenges and to build resilience to adapt to and recover from biosecurity incidents.

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?

The states and territories have already published biosecurity strategy documents that outline their respective visions for biosecurity, while also setting out relevant roles and responsibilities and key work to be undertaken to address and manage biosecurity risks.

An Australian Government national biosecurity strategy is in development. This Strategy will describe activities being undertaken across the biosecurity and emergency management continuums and assist stakeholders and the community better understand the breadth of the department's biosecurity work. In conjunction with the state and territory biosecurity strategies, this strategy will increase stakeholders understanding of the components and functions of Australia's national biosecurity system.

Based on stakeholder consultation conducted by the Department of Agriculture and Water Resources, including the National Biosecurity Roundtables, it anecdotally appears that many stakeholders have a sound understanding of their part of the biosecurity system but lack an overall view. For example, importers may understand import biosecurity requirements but lack a system wide view. This also applies to stakeholders who are only involved in domestic trade. While they have a sound understanding of state biosecurity requirements, they may

lack understanding about Commonwealth biosecurity requirements and Australia's international obligations.

The submissions to the 2015 Senate Environment and Communications References Committee's Report on Environmental Biosecurity also indicated that stakeholders were not aware of the full scope and breadth of activities undertaken by all jurisdictions that support management of biosecurity risks to the environment.

In 2014, the Department of Agriculture and Water Resources undertook Exercise Odysseus, which simulated an outbreak of foot and mouth disease in Australia. This Exercise provided an opportunity to assess the community and industry's knowledge of their responsibilities during a response while also identifying and documenting communication channels. The Exercise demonstrated that participants' knowledge about communication plans and processes varied considerably. However, it was universally acknowledged that knowledge and understanding of communication arrangements was enhanced through Exercise Odysseus.

To this end, the Department of Agriculture and Water Resources is undertaking a Social Attitudes and Understanding of Biosecurity survey. This will identify stakeholder understanding of the biosecurity system. It will enable future departmental policies and programs to be better aligned and allow for improved, targeted engagement to fill the gaps in stakeholder understanding. This issue could also be partly addressed by the development of a national statement of intent on biosecurity.

The Australian Government, and states and territory governments have an important role in communicating about biosecurity issues and the roles and responsibilities of all relevant stakeholders. There would also be value in placing greater emphasis on the communication of successful actions that prevent the entry, contain the spread and limit the impact, or result in the eradication of pests and diseases, which would more clearly demonstrate the effectiveness of Australia's biosecurity system. Communication of successful actions would also provide an opportunity to demonstrate the important role industry and the community play in Australia's biosecurity system.

Stakeholders with less exposure to government approaches to biosecurity, such as community and environmental groups, have not always had the opportunities or platforms to develop their understanding of biosecurity issues or contribute to the direction of biosecurity policy. Efforts are being made, through the biosecurity roundtables and other engagement forums, to more effectively engage with non-industry stakeholders.

The development of a comprehensive State of the Biosecurity System report could be a useful tool to describe and inform stakeholders and the community on Australia's biosecurity system.

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?

An integrated national approach would improve communication between stakeholders, reduce duplication of efforts across different sectors and regions and capitalise and build on existing resources to minimise the entry and spread of pests and diseases. Improved

integration of the national biosecurity system could also be achieved through greater streamlining of communication channels and funding streams. However, due to the significant variation in biosecurity risks and priorities across regional locations and industries, there remains a continued need for some differentiation.

Some other benefits of a more integrated national approach to biosecurity include:

- improved information and intelligence sharing resulting in a greater capacity to anticipate and prevent biosecurity risks
- sharing expertise, where required, across governments and between government and industry to improve effectiveness and efficiency of biosecurity activities
- streamlining the mobility of human resources across agencies and sectors to improve the capacity and efficiency to respond to emergencies
- development of nationally consistent skills and standards nationally through the development of national biosecurity training and qualification standards
- presenting a stronger and unified message on biosecurity matters
- improving continuity of activities across the biosecurity and emergency management continuum
- building greater awareness of, and commitment to, the principle of shared responsibility.

However, there are also a range of obstacles to achieving a more integrated national approach, including:

- the decreased funding available for biosecurity across jurisdictions
- the shifting of the costs and responsibility for biosecurity between jurisdictions
- the difficulties associated with ensuring that all parties are held to account for delivering their obligations under the national biosecurity system.

One example of national integration within biosecurity is the Established Pests and Diseases of National Significance Framework, a product of IGAB. This framework sets out the roles and responsibilities in relation to nationally significant established pests and diseases, including where actions are led by industry and the community. There are also opportunities for establishment of national centres of expertise for different biosecurity priorities. For instance, the Queensland Government is fast becoming a national hub for expertise on the management of tramp ants.

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?

A national statement of intent could assist in further clarifying roles, responsibilities and priorities for biosecurity. The NBC could also consider whether it would be appropriate to develop a national policy statement or a combined government-industry biosecurity strategy.

Any document produced must be consistent with the goals and priorities of the national biosecurity system, be supported by both government and industry participants, share responsibility for implementation of the national biosecurity system across government and industry, set out realistic and practical obligations for stakeholders and be accompanied by sufficient resources for implementation.

In supporting the principle of shared responsibility for biosecurity, the broader community including industry and other stakeholders must have a significant role in the development of these documents and in their implementation. Finding a way to gather and balance the competing views of different community and industry sectors and coordinate across those sectors is critical to the success of the system.

Community understanding and acceptance of managing biosecurity risks is critical to the sustainability and operation of Australia's biosecurity system. Australian governments and industry work together to help the wider community, which includes landholders, scientists and non-government organisations, understand what biosecurity means for them so that we can continue to improve community participation and confidence in Australia's biosecurity system.

The Australian community is responsible for:

- building biosecurity risk mitigation measures into normal household and business practices
- complying with federal and state regulatory obligations, including not importing prohibited goods and complying with the conditions on the importation of goods that are allowed
- reporting new or unusual weeds, pests and diseases in marine, freshwater and terrestrial environments
- contributing to community action to manage biosecurity risks and protect valuable public assets, such as parks and reserves
- managing declared established pests and diseases, where a community member is a landholder/manager.

Question 9 - Are the roles and responsibilities of stakeholders in Australia's national biosecurity system clearly and consistently understood? How might this be improved?

As stated in the IGAB, biosecurity is a shared responsibility across governments, industry and the community, including risk creators and private beneficiaries. Productive relationships with stakeholders are critical to ensure Australia is able to maintain a strong biosecurity system that can effectively prevent, identify and manage any incursions quickly and prepare for new biosecurity challenges into the future.

The Australian Government is continuing to collaborate with states and territories, industry, and other stakeholders to develop a consistent and coherent message on biosecurity, while also continuing to develop communication materials that provide this information to stakeholders through a number of different fora, such as the biosecurity roundtables.

The Biosecurity Roundtable (Roundtable) is an annual event that has been held since 2008. It provides biosecurity stakeholders the opportunity to engage directly with the Australian Government, state and territory governments and industry representatives about biosecurity-related issues. Feedback from previous Roundtables indicated that they are a unique and highly valued opportunity for stakeholders, but there is some room for improvement, such as by expanding the invited stakeholders to include other stakeholders such as relevant environmental groups.

Stakeholders indicated a preference for more consultation opportunities, held outside of Canberra. It was also suggested that the NBC play a greater role in the design and delivery of

the event. As a result, the NBC and the department have trialled a new roundtable format in 2016. Instead of a single event, the Roundtables consisted of a series of state-based roundtables between April and July 2016, culminating in a National Forum later in the year.

Seven roundtables have been held in each capital city (with the Australian Capital Territory and New South Wales hosting a combined event). State-based Roundtables made these events more accessible for stakeholders unable to travel to Canberra. As a result, the new format has resulted in significantly more stakeholders attending than previous years. For example, in 2013, 89 stakeholders attended a single event. In 2016, 170 stakeholders attended seven events, an increase of 91%. These numbers will increase once the National Forum has been held later this year. The department is analysing the key themes from the Roundtables and preparing items for discussion at the NBC. Feedback was sought at each of the Roundtables, with 97% of respondents saying they found the roundtable useful and 100% saying they would recommend it to others.

The Centre of Excellence for Biosecurity Risk Analysis (CEBRA) has been engaged to deliver a project on the health of Australia's biosecurity system project which could also be used to determine the level of community awareness, knowledge and engagement on biosecurity matters.

There may also be opportunities for further communication tools to be produced under IGAB, which provide more practical information on everyone's roles and responsibilities within the 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?

The Australian Government is committed to strengthening industry, and other stakeholders' engagement in the national biosecurity system. To this end, the Australian Government is investigating measures to improve industry and community engagement, including through the use of new technologies and social media. For example, the recent implementation of biosecurity liaison officers for biosecurity import risk assessments has facilitated a greater understanding of the relevant processes and issues and provide a point of contact for stakeholders to resolve queries and provide information.

A key avenue for industry engagement is through the PHA and AHA. However, these organisations represent their members and do not represent the view of non-members or all of the stakeholders involved in the multi-faceted biosecurity sector.

Environmental biosecurity is an area of growing national awareness. The impact of plant and animal pests and diseases on Australia's environment and biodiversity is recognised and is being addressed in the management of biosecurity risks, for example in the development of a Threat Abatement Plan to reduce the impacts of tramp ants. However, there is an opportunity for environmental biosecurity to take a more prominent role within an integrated national biosecurity system.

The government is of the view that the establishment of a new body exclusively focusing on environmental biosecurity issues would not be the best use of the limited resources available

for biosecurity measures. The government considers a more effective approach is to better integrate environmental issues into existing biosecurity governance structures, functions and activities and to strengthen collaboration and consultation with relevant stakeholders, including community members. This approach builds on already strong arrangements established through the NBC, its sectoral committees and other relevant organisations, rather than creating a separate system.

Strengthening engagement and involvement of industry and other stakeholders in the biosecurity system is likely to be a key aspect of improving the sharing of costs and responsibilities between government and non-government stakeholders. This should increase the likelihood that every member of the community plays their part in implementing the national biosecurity system and identifying and managing biosecurity risks in Australia. The establishment of formal engagement and partnership arrangements between government and stakeholders may increase buy-in and participation on biosecurity matters.

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 decision-making and investment principles set out in the IGAB are workable and do meet the needs of Australia's national biosecurity system. However, these principles have yet to be formally implemented. Consequently, there needs to be greater emphasis under the IGAB on timely and consistent implementation of these principles to guide decision-making on biosecurity investment.

The biosecurity investment stocktake initiated by NBC in 2014 was the first national, systematic and structured analysis of how public funds are being invested in biosecurity. The NBC is undertaking a third national biosecurity investment stocktake in 2016, which will provide important data on the distribution and allocation of resources within biosecurity across jurisdictions and biosecurity activities. This will be of assistance in identifying gaps in resource allocation in priority areas and inform future decision-making on investments.

It is likely that new and alternative sources of investment will need to be sought in order to meet and address the growing biosecurity risks Australia is likely to face in the future. Existing funding mechanisms could also be evaluated to optimise the allocation of resources.

Full application of the shared responsibility principle to funding arrangements would likely result in the direct costs of some biosecurity programs reducing significantly by requiring parties to carry out activities as required at their own expense. It is therefore important that structured and consistent mechanisms are implemented by jurisdictions to impose and capture these contributions in biosecurity program plans (including response plans).

It would also be important that any implementation of the shared responsibility principle take into account sectors other than agriculture that could be beneficiaries or risk creators. These include:

- mining
- infrastructure, building and construction
- tourism
- transport e.g. shipping, ports, road and rail
- environment e.g. National Parks, botanic gardens, zoos and aquaria
- Defence e.g. when moving personnel/equipment in and out of Australia.

Mechanisms that could be considered include a broad biosecurity levy or requiring sectors to undertake risk mitigation activities.

The NBC has already produced a range of investment principles in relation to work items under Schedule 2 of the IGAB. The NBC, through the Funding Model Steering Group, has also developed the National Framework for Cost Sharing of Biosecurity Programs. This framework sets out the key funding policy principles to guide and inform the development of a model for the cost-sharing of national biosecurity programs into the future, with a particular emphasis on securing contributions from risk creators and beneficiaries. It is up to individual jurisdictions to implement this framework in their jurisdiction to ensure adequate and appropriate cost sharing measures are in place to support biosecurity activities, particularly in relation to contributions from risk creators and beneficiaries.

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.

In March 2015, the NBC considered a report 'The National Biosecurity Investment Portfolio', which focused on the allocation of Commonwealth and state and territory government investment across a range of biosecurity categories. This Report found that there is potential to further optimise return on biosecurity investment by re-considering allocation of resources across the national biosecurity system. This will be further considered by the NBC in light of the results of the biosecurity investment stocktake.

There is evidence of national under-investment in preparedness and surveillance activities. For example, in the marine pest sector there are 18 key ports where monitoring was intended to be undertaken every two years. However, in the majority of those ports monitoring and surveillance activities have only been undertaken once or twice over a period of 15 years. The Department of Agriculture and Water Resources review of national marine pest biosecurity highlights the significance of biofouling as a significant risk pathway; however there remains no national requirements for vessels to manage biofouling prior to entering Australian waters. This is a significant gap in Australia's marine pest biosecurity arrangements and if managed effectively could lead to substantial risk reduction.

In an increasingly restrictive fiscal environment within which to deliver an effective biosecurity system, it is difficult to generate support for directing funding away from responding to incursions and managing established pests to preventative and intelligence gathering functions. To address this, \$200 million has been committed under the Agricultural Competitiveness White Paper to improving biosecurity surveillance and analysis. More information on surveillance activities is provided in response to Question 18.

The development of a national biosecurity investment strategy would enhance the transparency of biosecurity investment in Australia, and publicly set out the policies and principles that would guide investment decisions to optimise return. Such a strategy could also provide the necessary justification for allocating resources and funding to upstream biosecurity activities (anticipation, prevention and preparedness). The invasion curve diagram (**Attachment 1**) shows an indicative scale of the aggregate return on investment in the different activities, and highlights that the return on investment of public funds generally diminishes when progressing from left to right along the curve.

Question 13 - How do we ensure investments and investment frameworks align with priorities, while being flexible enough to address changing risks and priorities?

The Australian Government currently ensures investments and investment frameworks align with priorities through working with the 15 Rural Research and Development Corporations (RDCs) across agriculture, fisheries and forestry industries in Australia to ensure that they meet government financial and accountability standards, including performance reporting.

The RDCs provide a range of services to the industries that they support and are funded through a mix of taxpayer and industry contributions. Their particular role and place within the rural innovation system as investment managers, custodians of public and private funds, and service providers to industry and government, means that there is a high regard for ensuring a strong focus on governance and accountability of funds being managed, on efficiency and effectiveness of process employed, and on delivering value and impact from activities.

There is an opportunity for the Australian Government to utilise RDCs to undertake more work on priority biosecurity matters.

Development of a national biosecurity investment strategy may assist in ensuring that decision-making on biosecurity investments are effective and consistent with national biosecurity priorities. However, this is an area where further work could be done to achieve greater accountability and ownership nationally. As investment and allocation of biosecurity resources is fundamental to implementation of the national biosecurity system, decision-making regarding biosecurity investment would be required to be regularly reviewed to ensure relevance to evolving risks and priorities.

The biosecurity investment strategy should include principles for selecting investments and build in the requirement for periodic review to remain adaptable in the face of new challenges.

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?

The Australian, state and territory governments spent an estimated \$664 million in 2014-15 on biosecurity activities, although there has been a decline in public funding allocated to biosecurity risk management by most governments. Funding principles, reflected in the IGAB, require that beneficiaries and risk creators contribute to biosecurity activities in proportion to the benefits they receive and/or the risks they create.

Funding of Australian Government provided services are through a variety of mechanisms – at the border the Department of Agriculture and Water Resources undertake cost recovery through fees and charges to fund the activities required to support risk creators (importers). Responses and research and development are funded by levies supported by Commonwealth legislation. Public good benefits of the biosecurity system are funded through revenue from taxation.

Recently, the Australian Government undertook a review of cost recovery arrangements, resulting in the development of the 2015 cost recovery implementation statement (CRIS), which provides information on:

- the legislative basis for cost recovery
- the design of fees and levies
- how fees and levies are applied
- ongoing reporting on the fees and levies.

It may also be of value for all states and territories to undertake a review of the delivery of their biosecurity services.

The increased use of approved arrangements for specific biosecurity services and activities has already resulted in, and will in the long term continue to result in, reduced costs for government as well as reductions in government expenditure, which would enable some redistribution of biosecurity funds into other key priority areas.

As mentioned in response to Question 12 above, a national framework for cost sharing of biosecurity programs has been developed by the NBC's Funding Model Steering Group.

It is expected that the national investment stocktake will also provide useful data on the current state of resource allocation. A national investment strategy could provide high level guidance to support more effective resource allocation while also identifying the need for additional funding.

In regards to funding of emergency response activities, the Australian Government has three deeds for responding to pest and disease incursions that affect plants, animals and the environment. In addition, deeds on weeds and aquatic animal diseases are under development to fill some of the existing gaps in the current emergency response arrangements. These arrangements provide funding certainty and clearly identify what the Australian Government will and will not fund in the event of a biosecurity incursion. A review could be undertaken to assess the benefits of consolidation of all of the emergency response deeds into a single deed to manage emergency biosecurity responses against all types of pests and diseases.

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?

Clause 4.1 of the IGAB requires that risk creators and beneficiaries both 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 that governments contribute to the cost of risk management measures in proportion to the public good accruing from them.

However, while the current response deeds include cost sharing mechanisms with (industry) beneficiaries, these arrangements do not extend to equally important activities such as preparedness and early detection.

Furthermore, while much of the biosecurity activity delivered offshore and at the border is funded using cost-recovery mechanisms, there are limited mechanisms in place to secure contributions from risk creators for onshore (post-border) biosecurity activities in the form of industry levies.

As mentioned above, work has been done by the Funding Model Steering Group, under the IGAB, to develop a framework to guide the implementation of cost sharing arrangements in biosecurity, particularly by securing contributions from risk creators and beneficiaries. The Steering Group has also produced guidance to support jurisdictions implement the framework to ensure that jurisdictions adopt an equitable, effective and consistent approach to cost sharing arrangements.

This is an area which will require further consideration and could be addressed to some extent by the development of a national biosecurity investment strategy. Funding will become increasingly important to ensure equitable and sustainable investment to maintain an effective and efficient national biosecurity system.

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?

Yes. The national biosecurity system has an essential role in creating and protecting market access for primary producers, by preventing the introduction and establishment of exotic pests and having systems in place to rapidly respond to incursions when they do occur. Our ability to demonstrate area freedom from damaging pests and diseases allows Australian produce to be sold into a range of lucrative export markets. An effective biosecurity system also safeguards Australia from unwanted pests and diseases and maintains its natural biodiversity within healthy ecosystems (e.g. the Great Barrier Reef).

For example, Australia's freedom from oriental fruit fly protects market access for our \$9 billion horticulture industries. The oriental fruit fly infests over 300 hosts and is considered the world's most damaging pest of tropical horticulture. It is present in Indonesia and Papua New Guinea, making northern Australia a high risk pathway. The economic impact of the establishment of oriental fruit fly in Australia has been estimated at over \$1.25 billion. A number of our existing export markets require freedom from oriental fruit fly for certain commodities, and the benefits of country freedom from such significant economic pests are clear when considered in this context.

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?

The National Biosecurity Committee (NBC), whose memberships consists of senior officials from Australian, state and territory primary industry or environment departments, and observers from Animal Health Australia and Plant Health Australia, ensures widespread representation of industry and government in biosecurity decision-making and creates buy-in from government and industry partners.

The NBC is also supported by a number of sectoral expert committees. As part of its collaboration with the NBC, the government is working with states and territories and industry partners to explore alternative funding models and has acknowledged the importance of shared responsibility for funding and implementation of the biosecurity system between government and industry.

The Australian Government will need to continue to work with states and territories and industry organisations to improve efficiency and transparency of biosecurity investment and

resource allocation, while also continuing to consider alternative sources for biosecurity funding. The current delineation of resources and funding for plant and animal diseases may also be a source of inefficiency which could be streamlined.

The role of industry and the community is critical to the implementation of an effective biosecurity system. However, due to the reality that biosecurity considerations can conflict with the commercial priorities of industry, it is important that governments maintain regulatory oversight of the biosecurity system, with a leadership role in managing the public good aspects of the biosecurity system.

Question 18 - How can the capacity and capability of surveillance systems (including diagnostic systems) underpinning Australia's national biosecurity system be improved?

Surveillance is an essential element of Australia's biosecurity system. By enabling early detection of pests and diseases, surveillance helps to safeguard primary industries, the environment and communities from the impacts of emerging and exotic pests and diseases. By providing robust evidence to support the claims of pest/disease status, surveillance also enables access to international markets and upholds the confidence of domestic consumers in Australia's plant and animal products.

To support effective surveillance the Australian Government:

- undertakes surveillance activities offshore, at the border and within Australia
- invests in biosecurity research, data systems and information-sharing both domestically and internationally
- works with state and territory governments (including through links to community and industry surveillance), to boost our onshore monitoring and surveillance activity
- develops and widely promotes tools to identify and report biosecurity risks and ensure these tools are readily accessible to all stakeholders
- supports biosecurity surveillance and/or surveillance capacity building in near-neighbour countries.

The *Biosecurity Act 2015* contains new monitoring powers that broaden the capacity for the Australian Government to undertake surveillance activities for a greater range of pests and diseases in any area deemed necessary. This means that legislative powers supporting surveillance are no longer restricted to monitoring vectors around the first points of entry.

While Australia's current surveillance system functions well, there is room for improvement. Currently, surveillance to determine distribution of pests and diseases is undertaken primarily by state and territory governments and the private sector. The Australian Government uses the information gathered to produce international reports and provide certification for Australian exports. Declining resources for surveillance in the states and territories over the past 20 years has reduced the amount of surveillance activity and consequently the amount of surveillance data collected.

A lack of surveillance coordination and linkage across divisions and jurisdictions impedes monitoring and improvement of the system. The capacity and capability of surveillance systems in Australia would benefit from clarification of surveillance objectives and specific information requirements in order to more efficiently target and tailor the surveillance activities, surveillance data collection to better support the objectives. Clearer articulation and ownership of surveillance policies, how information is or should be collected, how it is

shared across jurisdictions and it relates to decision making would help to improve outcomes. An improved ability to share surveillance data would allow gaps or overlaps in surveillance activities to be more readily identified.

The development and implementation of policy frameworks, such as the National Surveillance and Diagnostics Framework, developed under the IGAB, promote consistent surveillance activities being undertaken by the Australian Government, state and territory governments and third parties and ensure that international obligations can be met.

There is an opportunity for industry and the community to play a greater role in biosecurity surveillance. Their capability for biosecurity surveillance can be improved through the communication of clear and consistent messages that improve general understanding of biosecurity issues and ways to report them.

The Agricultural Competitiveness White Paper provides funds that help to address some of these issues. Under the White Paper, \$200 million has been committed to improving biosecurity surveillance and analysis to better target critical biosecurity risks and protect our animal and plant health status. The investment focusses on four key areas: strengthening biosecurity surveillance, building community based engagement, growing scientific capability and improving analytics.

To strengthen surveillance the Department of Agriculture and Water Resources is:

- identifying priority pests, diseases and regions to guide future surveillance and investment
- designing and implementing new surveillance methods and technologies
- facilitating more surveillance, especially in peri-urban areas and off-shore
- building the surveillance capacity of international officials and local industry
- enhancing biosecurity networks across Australia to help us work more collaboratively and innovatively.

Under building community based action the Department of Agriculture and Water Resources is:

- targeting biosecurity messaging to specific communities
- using technologies to improve awareness of biosecurity threats and ways to report them
- increasing surveillance across northern Australia through expansion of the Indigenous rangers programme

As part of growing scientific capability, the Department of Agriculture and Water Resources is improving the equipment and infrastructure we need to conduct scientific analyses and diagnoses. The department is also improving information and analysis capability by building the analytical skills of staff, replacing some old biosecurity information systems and exploring data sharing with states, territories and industry.

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.

Research and analysis inform decisions about how to best identify, prevent and manage biosecurity risks. With better knowledge and understanding, the department is more efficient and effective in its approach to managing biosecurity risk. The Department of Agriculture

and Water Resources is continually developing its information base, along with supporting tools and systems, to enable more strategic management of biosecurity risks.

As previously noted, biosecurity risks are changing significantly and growing in complexity. The Australian Government has been collaborating with research agencies to plan for future business needs and predict emerging biosecurity risks. As mentioned in response to Question 5 above, the CSIRO identified megatrends expected to impact biosecurity in the future. In this report, five biosecurity megatrends were identified which should inform future requirements for biosecurity system research and innovation. These are:

- ‘an appetite for change’ – biosecurity will become increasingly important as agriculture expands and intensifies to meet rising global food demand
- ‘the urban mindset’ – as a country of urban dwellers, Australians are increasingly disconnected from biosecurity issues. At the same time, urban encroachment and peri-urbanisation continue to create new biosecurity challenges
- ‘on the move’- greater global trade and travel are creating new opportunities for pests and diseases to enter and spread across Australia
- ‘a diversity dilemma’ – the significance of biosecurity threats relating to declining biodiversity, redistribution of species and declining agricultural biodiversity will become clearer to us over the coming decades
- ‘the efficiency era’ – a trend towards declining resources in biosecurity is seeing a rise in the use of (and reliance on) technology

The Australian Government is committed to research and innovation with the intention of also generating and sustaining a culture of innovation across the government by supporting staff to take calculated risks and trialling innovative solutions and embedding innovation into departmental business plans.

Each of the NBC sectoral committees is developing, or has developed, a research, development and extension (RD&E) strategy. The priorities from the strategies could be utilised to inform upcoming research priorities in each of these areas.

Question 20 - How can coordination of biosecurity-related research and innovation activities be improved?

On 20 May 2014, the University of Melbourne was awarded a four year grant of \$7.8 million for the establishment of CEBRA. The purpose of CEBRA is to deliver practical, rigorous solutions and advice related to the assessment, management, perception and communication of biosecurity risk. CEBRA also helps to coordinate the Department of Agriculture and Water Resources research and development for biosecurity. To achieve this, CEBRA:

- researches and develops new and existing methods relevant to biosecurity risk
- engages the range of disciplinary skills relevant to the analysis of biosecurity risk, to ensure governments remain at the forefront of practical risk assessment
- helps the department understand and develop incentive-based approaches to ensure their products do not carry pests, diseases or weeds
- collaborates and engages with end users to improve adoption of methods and increase the impact of research findings
- documents and communicates research findings to governments and others engaged in biosecurity decision-making
- works to promote excellence in risk analysis.

The Department of Agriculture and Water Resources has engaged CEBRA to deliver a health of Australia's biosecurity system report.

In 2012, an audit of biosecurity research and development capability was undertaken to capture information on capacity and government investment in biosecurity-related research and development activity across the biosecurity sectors. Following this, research, development and extension (RD&E) strategies have been developed to establish the future direction for and improve the focus, efficiency and effectiveness of RD&E for animal, plant and community and environment biosecurity. These strategies will continue to be assessed to ensure ongoing alignment with biosecurity risks and priorities.

Some other strategies which may also be able to improve the coordination and communication of biosecurity research and development outcomes are:

- effective communication of research - there has been a shift away from published documents (paper and electronic) to more interactive digital platforms for delivery of research and messages, which will ensure that research data is available for a broader demographic and over a longer term
- citizen scientists and collaborative pest surveillance (involving local communities and Indigenous rangers) currently provide valuable contributions to biosecurity - this successful model could be more widely extended
- streamlining and improved information sharing to reduce duplication of research and facilitating the benefits of research and innovation being spread across the whole biosecurity system
- making research more readily available to end users and decision-makers.

Question 21 - How can innovation (including technology) help build a more cost-effective and sustainable national biosecurity system?

As mentioned in response to Question 5 above, it is important that the barriers to technological innovation are identified and addressed, as technology is likely to play a significant role in addressing and communicating future biosecurity challenges efficiently.

Technological solutions, such as drones, geo-fencing, DNA analysis and possibly even gene-drives, are likely to play an important role across all aspects of the national biosecurity system, including biosecurity surveillance and monitoring, data and analytics, communication and engagement, genetics and ensuring the sustainability of our agricultural system and natural ecosystems. Innovative technological solutions can help to ensure that the benefits of past projects, datasets and incidents can continue to be built upon.

To maximise the utilisation, effectiveness and efficiency of innovation and technology within the national biosecurity system, the Australian Government needs to:

- collaborate closely with industry and the community
- promote sharing of information
- minimise bureaucratic obstacles
- encourage research and innovation, in particular where they result in sustainable development.

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?

Australia's biosecurity system provides a substantial benefit to the Australian community by managing the risks of pests and diseases entering, establishing, spreading, causing harm to human, animal and plant health, the environment and the economy. Australia also benefits from an effective biosecurity system by being better positioned to export high quality agricultural produce into premium international markets. Maintaining and enhancing Australia's favourable animal and plant health status, underpinned by evidence-based policy, is therefore critical.

Australia's national biosecurity system is inherently valuable but its value is difficult to quantify. This is because the system has a complex interplay of parts across supply chains, geographies, jurisdictions and stakeholders. The Department of Agriculture and Water Resources is commencing a project to produce a clear and sound evaluation on the value of Australia's biosecurity system, which will effectively communicate the importance of the investments made in the system across regulatory requirements, operational activities, information management and research. This project would be a first step in being able to systematically identify and address current and future weaknesses across the breadth of the system. It would also create a benchmark value from which the future performance of the system can be compared. These values will also be used to establish baseline data for the future health of Australia's biosecurity system project.

The value of Australia's biosecurity system project would not focus solely on market benefits, but would use techniques to understand public value / amenity values that the biosecurity system protects. The value of the biosecurity system should be considered as a net benefit that takes account of the cost of the activities undertaken, the effectiveness of those activities, and the valuation of avoided consequences. The project would provide methods and examples of the applications of those methods, along with illustrative case studies, to estimate the value of the biosecurity system as a whole.

A subsequent phase would further develop the value estimation methods partitioned across components of the system, with additional emphasis on non-market and environmental values. It would also consider where resources should be directed to enhance the overall value of the biosecurity system. Methods assessed and adopted would include cost-benefit analysis, ranking and aggregation of value measures and rates of return or portfolio allocation measures.

The health of Australia's biosecurity system, incorporating the data from the value of the system project, could then be utilised to create a broader and more reaching report into the State of the Biosecurity System. Such a big picture perspective of Australia's biosecurity system would clearly identify biosecurity achievements, areas for improvement and any gaps.

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?

As previously noted, the prevalence and impact of biosecurity risks are on the rise. More global trade, changing regional prevalence of pests and diseases and the development of northern Australia all mean better surveillance and information are needed to combat the

entry and spread of pests and diseases in Australia. A strong biosecurity system opens access to export markets, lowers production costs for producers and safeguards our environment and health.

Successful data systems require consideration of the perspectives of the data managers, generators and users, and a strong data management culture and strong governance. The Agricultural Competitiveness White Paper is committing an additional \$200 million to improve the biosecurity system. This includes a stronger biosecurity surveillance and analysis system to better target biosecurity risks, including in northern Australia, which will significantly enhance the value of the biosecurity system. Current systems, many of which have manual processes, are non-integrated, inefficient, and do not support assessments of risks or changes to pest status where circumstances change. The Biosecurity Integrated Information System (BIIS) that will, subject to approval, be implemented at the beginning of 2017, will improve the Department of Agriculture and Water Resources' ability to collect, collate and analyse information to support better biosecurity decisions. It will support more rapid assessment of biosecurity risks, market access, and pest and disease incidence and compliance information.

The development of an advanced analytics capability will help make the best use of information captured by the BIIS. It will answer questions about what has happened and why (descriptive analytics), and what might happen in the future (predictive analytics), through the application of modelling and data analysis. Analytics will ensure our decisions are data driven and will help us target our valuable biosecurity efforts to those areas of highest biosecurity risks. It will improve:

- biosecurity risk profiling and analysis, including invasive pathway modelling
- pest and disease detection and prediction
- demonstration of proof of freedom
- community-based data for biosecurity risk management
- management of biosecurity regulatory compliance.

The combination of improved data quality and linked systems through BIIS together with analytics will help to plan surveillance activities and inspection regimes, measure how well the biosecurity system is working, and identify and manage emerging risks. In this way, information is translated into intelligence. Better data management, analysis and modelling will also support our valuable exports by providing unambiguous proof of freedom from certain pests and diseases to international partners.

The Department of Agriculture and Water Resources is also committed to improving its analytics capability by recruiting and training to increase the number, and skills, of analysts. This will result in the development of an expert advisory capability to advise on and commission research into biosecurity analytics and modelling, and thereby improve the capacity of the Australian Government to effectively utilise and analyse biosecurity data.

In acknowledgement of the importance of sharing and disseminating intelligence findings, transparency and public access to data, the Department of Agriculture and Water Resources will facilitate data sharing with state and territory governments and relevant stakeholders.

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?

Data capture, and the use of data through more sophisticated analysis, will be greatly improved through the implementation of the BIIS and the development of an advanced analytics capability (see Question 23, above).

The Australian Government is committed to two-way communication of information, and seeks to improve stakeholder and community engagement in biosecurity issues. The NBC and its sub-committees, and the biosecurity roundtables offer opportunities for government to engage with industry and the community and provide informal opportunities for information sharing. The establishment of formal mechanisms to communicate and engage with industry on biosecurity matters may result in greater industry buy-in and greater voluntary data sharing between governments and industry.

SUPPLEMENTARY QUESTIONS FROM NBC22

At the National Biosecurity Committee meeting held on 13 July 2016, the IGAB Review Panel sought greater insight into each jurisdiction's biosecurity arrangements and requested the following additional information:

- a. A diagrammatic representation (with explanatory text) showing how biosecurity is managed within each jurisdiction on a whole-of-government basis. Desirably, this would include responsible ministers and agencies, committees (advisory and other), the functions performed by each structural element and any agreements (including funding through treasuries), memoranda of understanding and strategies that may underpin an arrangement, relationship or the work of a committee.
- b. For each jurisdiction to set out its view of the specific roles and responsibilities of governments in the biosecurity system, including the apportionment of public good.
- c. Fact check of the panel's draft diagram 'Recent Activity in the Biosecurity System (indicative only)' as presented at AGMIN in May 2016. This diagram covered significant animal and plant incursions, governance (legislation, deeds etc.) and reviews from 2000–2016.

A – Management of biosecurity – Australian Government

The Department of Agriculture and Water Resources has responsibility for leading on biosecurity matters across the Australian Government.

Attachment 2 diagram represents the hierarchy of decision-making and underlying committees, led by the Agriculture Minister's Forum, chaired by the Deputy Prime Minister and the Minister for Agriculture and Water Resources, the Hon Barnaby Joyce MP.

The Department of the Environment and Energy is responsible for developing and implementing environmental biosecurity policy relating to threat abatement and protection of biodiversity. Within the department, responsibility for environmental biosecurity matters rests within the Wildlife, Heritage and Marine Division of the Environment Protection Group, headed by a Deputy Secretary (**Attachment 3**).

In addition to this, the Department of Agriculture and Water Resources has also enacted memoranda of understanding (MoUs) with the Departments of Health and Immigration and Border Protection.

The MoU with the Department of Health, signed on 9 May 2014, includes the performance of functions, and exercise of powers in relation to biosecurity under the *Quarantine Act 1908* (since been repealed and replaced by the *Biosecurity Act 2015*).

The Department of Agriculture and Water Resources and Australian Border Force officers work side-by-side at Australia's airports, seaports and mail centres supporting legitimate trade and travel and protecting the Australian community from a range of border and biosecurity risks. The MOU, signed on 21 July 2011, underpins the strategic working relationship between the two agencies where collaborative cooperation will identify opportunities to improve our effectiveness and efficiency in managing our common border protection and biosecurity functions.

The Emergency Plant Pest Response Deed (EPPRD), which was ratified in 2005, is a formal legally binding agreement between Plant Health Australia (PHA), the Australian Government, all state and territory governments and national plant industry body signatories (available from: <http://www.planthealthaustralia.com.au/biosecurity/emergency-plant-pest-response-deed>). The EPPRD covers the management and funding of responses to emergency plant pest (EPP) incidents, and formalises the role of plant industries' participation in decision making, as well as their contribution towards the costs related to approved responses.

The Emergency Animal Disease Response Agreement (EADRA), managed by Animal Health Australia, was signed in 2002 and comprises of 23 signatories from the Australian government, state and territory governments and livestock industry groups (available from: <https://www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/ead-response-agreement>).

The NEBRA, signed in 2012, sets out emergency response arrangements, including cost-sharing arrangements, for responding to biosecurity incidents that primarily impact the environment and/or social amenity and where the response is for the public good (available from: <http://www.coag.gov.au/node/74>).

B - Roles and responsibilities

To ensure the Australian Government and state and territory governments are working effectively together and that their efforts are complementary, rather than duplicated, the Australian Government:

- looks at the roles and responsibilities of government partners to ensure that national resources for biosecurity operations deliver maximum public benefits
- collaborates on monitoring and surveillance activities to improve our ability to quickly detect and respond to new pests or disease outbreaks
- works to improve the management of pests and diseases entering Australia through developing closer working relationships with other Australian Government border agencies
- maintains our clear and agreed financial responsibilities for emergency response activities.

Governments

Governments work with industry, producers and the 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 Australian Government is responsible for:

- matters relating to the national border, including development and enforcement of quarantine
- negotiating and facilitating international trade by certifying sanitary and phytosanitary conditions
- monitoring Australia's pest and disease status to meet international obligations
- threat abatement and recovery plans to reduce threats from invasive species and to promote the recovery of species and ecological communities under threat
- fulfilling international obligations including those under the World Trade Organization, the Convention on Biological Diversity and other international agreements and strategies
- promoting partnerships between government, industry and the community
- providing national leadership for strategic biosecurity issues, including responses to exotic pests and diseases and management of national significant established pests and diseases
- managing pests and diseases on land under its responsibility including implementation of Threat Abatement Plans
- responding to and controlling detections of exotic pests or diseases that have passed through border controls and are directly related to an imported good
- managing illegally imported goods and other breaches of the *Biosecurity Act 2015*
- assessing potential risks associated with imported goods.

State and territory governments are responsible for:

- biosecurity and natural resource management within their borders, including enforcement actions and regulatory interventions
- supporting international trade negotiations
- negotiating and facilitating domestic trade
- monitoring pest and disease status to meet domestic and international obligations
- regulating the keeping of plants and animals that pose significant risks
- undertaking biosecurity activities on public lands under their jurisdiction, and on private land under certain circumstances
- complying with international obligations
- promoting partnerships between government, industry and the community to prevent the entry or establishment of pests and diseases
- maintaining capacity to prepare for, detect and respond to exotic pest and disease incursions
- managing eradication programs for nationally agreed and other pest and disease incursions
- supporting landholders and the community to manage establish pests and diseases
- managing established pests and diseases on land under its responsibility.

Industry

Industry represents its producers, logistic and supply chains, exporters and importers, transporters and other relevant commercial entities, and has a vital role to play in the management of biosecurity risk.

Industry is responsible for:

- advocating biosecurity and leading biosecurity initiatives in the interests of their members
- building risk mitigation measures into normal industry practices
- complying with international and domestic obligations and regulations
- promoting partnerships between government, industry and the community
- maintaining capacity to prepare for, and respond to, exotic pests and diseases
- promoting reporting of new or unusual weeds, pests and diseases in marine, freshwater and terrestrial environments
- leading collective action to manage pests and diseases on behalf of their members
- managing declared established pests and diseases on private lands.

The IGAB is an agreement between the Australian and state and territory governments and therefore does no more than acknowledge the role on industry and the community in the shared responsibility principle of the national biosecurity system. Other mechanisms have been adopted to communicate and engage with industry and the community on biosecurity matters, and to ensure that everyone plays their role in preventing and managing biosecurity risks. However, the Australian Government is continuing to seek more effective means of communicating and engaging with non-government partners.

In regard to the apportionment of public funds, the formula for calculating the proportion of funding for biosecurity by the Australian Government is set out in detail in the three deeds, the EPPRD, EADRA and NEBRA. However, there may need to be further consideration of options to streamline Australian Government funding for biosecurity incidents, reduce duplication and overlaps, and to improve transparency and predictability. Consideration will be given to investment principles as part of the development of the national biosecurity investment strategy.

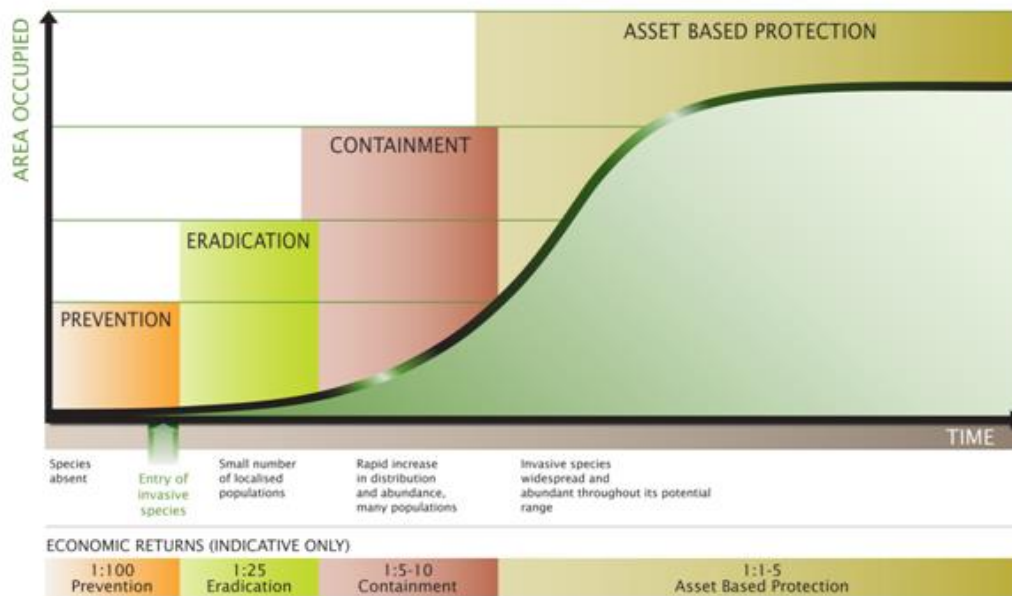
Attachments

Attachment 1 – Invasion curve

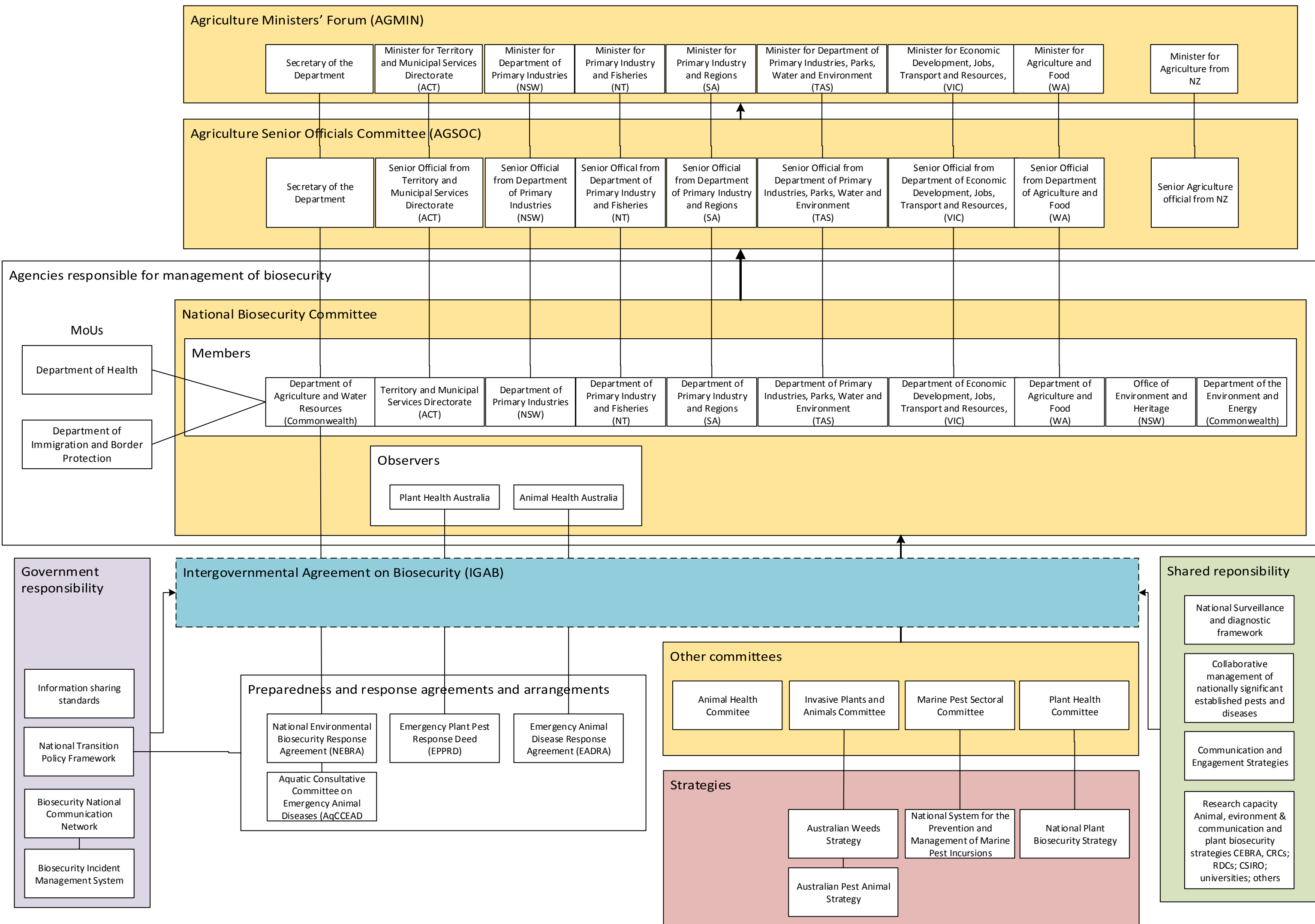
Attachment 2 – National biosecurity system hierarchy of decision-making

Attachment 3 – Department of the Environment and Energy structure

The Invasion curve – principle of risk-based approach for intervention



Graph sourced from: Victorian Government (2010) Invasive Plants and Animals Policy Framework, Department of Environment and Primary Industries, Victoria.]



Minister for the Environment and Energy
The Hon Josh Frydenberg MP

Secretary
Dr Gordon de Brouwer

