NSW GOVERNMENT | Department of Primary Industries

Office of the Director General

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Dear Dr Craik

Intergovernmental Agreement on Biosecurity Review

The NSW Government welcomes the review on the Intergovernmental Agreement on Biosecurity (IGAB), and would like to congratulate the IGAB Review Taskforce on the discussion paper.

This submission to the IGAB Review includes input from a range of NSW Government agencies with an interest and involvement in biosecurity including the Department of Premier and Cabinet, the Office of Environment and Heritage, Local Land Services, the Ministry for Police and Emergency Services and NSW Health. Our comments on the IGAB Review are in Attachment A.

The NSW Government is committed to the continuation of the IGAB. We request that, following the initial consultation period and publication of submissions, the IGAB Review Taskforce offer an additional consultation period so that government, industry and the community have the opportunity to respond to any recommendations which are put forward.

The IGAB has provided government parties with a strong framework for addressing national biosecurity issues. Through cooperation and collaboration between governments and peak industry bodies, there has been much progress in many of the priority reform areas. The understanding of biosecurity has increased for some stakeholders, however there is still a long way to go.

As outlined in the IGAB, the NSW Government also promotes the principle that biosecurity is a shared responsibility. We work with industry, the community, all levels of the NSW Government and other state and territory governments to increase awareness of biosecurity issues, and to prevent and respond to biosecurity incursions. We believe that good biosecurity outcomes rely on these partnerships, and are keen to see industry and environmental stakeholder contributions formally recognised.

NSW believes that a national biosecurity statement of intent that reflects these partnerships and outlines roles and responsibilities will strongly contribute to a robust biosecurity system.

We look forward to continuing our relationships with not only the Commonwealth Government but all jurisdictions and stakeholder groups so that together we can deliver good biosecurity outcomes.

Yours sincerely

SCOTT HANSEN
DIRECTOR GENERAL

Attachment A: NSW Response to Intergovernmental Agreement on Biosecurity Review

The IGAB, and Agreeing to objectives, risks and priorities

The NSW Government is committed to the continuation of the Intergovernmental Agreement on Biosecurity (IGAB), and is satisfied that the intent of the IGAB remains valid. We believe that the priority areas are appropriate.

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?***

Comment:

The IGAB was developed in order to allow Commonwealth, state and territory governments to agree on what the national biosecurity system should encompass to strengthen the collaborative approach between the Commonwealth and state and territory governments, to identify roles and responsibilities and to create a framework that would allow government to better coordinate and identify priority areas for reform (schedules 2-8).

The IGAB was not intended to be the only document or mechanism to underpin the national biosecurity system. It was always envisaged that there should be a higher level document outlining the national biosecurity system including stakeholders and partnerships.

The IGAB has been a success since it was approved by the Council of Australian Governments and there continues to be a need for an IGAB. The IGAB has provided government parties with a strong framework for addressing national biosecurity issues. There has been much progress in many of the priority reform areas despite economic and resource constraints and the ambitious reform program proposed at the time.

The national biosecurity system is not static and requires ongoing review and development. Development and implementation of the IGAB principles and key components and features is more advanced in some sectors compared with others and there needs to be an ongoing emphasis on implementing these across all sectors.

The consolidated priority areas as listed in the IGAB schedules are still valid.

In implementing the IGAB it was expected that 'the rate of progress in areas may be contingent on available resources and parliamentary processes'. The National Biosecurity Committee (NBC) and its IGAB Implementation Taskforce have reviewed these priority reform areas on an annual basis to develop an annual work plan for NBC and its sectoral committees. It is important that all of these priority areas continue to be addressed however, progress will depend on the available resources and the maturity and capacity of each sector.

Two of the priority areas requiring additional attention include:

(a) National Performance Standards and accountability:

Under the IGAB, parties commit to a strengthened national biosecurity system based on a number of components (section 5.2) and further commit to national performance standards for the maintenance, audit and review of capability and capacity to ensure the

delivery of essential biosecurity services across jurisdictions, ensuring the integrity of the national biosecurity system and allowing for continuous improvement (section 5.3 (ii)).

Despite these commitments, one of the key risks to the ongoing maintenance or improvement of our national biosecurity system is the continued decrease in available resources.

At present there are different processes in place for jurisdictions and industries to demonstrate their accountability against the Emergency Animal Disease Response Agreement (EADRA) and the Emergency Plant Pest Response Deed (EPPRD) and a further methodology is presently being trialled for the NEBRA. Ideally, a single process that allows parties and stakeholders to be assessed across the range of sectors, functions and capabilities is needed. As part of this single process there also needs to be further consideration given to what actions should be undertaken if jurisdictions or industries fail to meet their commitments.

(b) Communication and Education:

A key component of the IGAB is that the national biosecurity system will be supported by 'effective engagement and communication between all key biosecurity stakeholders' (Section 5.3 (vii)). This is reinforced through the priority reform area - the 'National Engagement and Communication Framework' (in Schedule 6 to the IGAB).

The partners to the IGAB have had successes in raising the awareness of some people about the importance of biosecurity to Australia's economy, environment and community. There is however still a long way to go before everyone is aware of and undertakes their roles and responsibilities within the national biosecurity system. Communicating, engaging and educating people across Australia about the importance of biosecurity to Australia's economy, environment and community and their roles and responsibilities in protecting our biosecurity status must be a priority. This should include everything from our schools to our multicultural communities, from our coasts to the inland, and to our urban, peri-urban and rural residents.

See also further comments under Question 6 and 9.

Recommendations:

We recommend that:

1.1 The IGAB is retained as part of the national biosecurity system.

1.2 Actions listed within the IGAB Schedules' 'Priority Reform Areas' continue to be reviewed and reprioritised annually.

1.3 Processes are developed to allow improved engagement, consultation and communication between government and other biosecurity stakeholders when reviewing, reprioritising and setting new priorities and developing annual work plans.

1.4 A single methodology that allows parties and stakeholders to demonstrate their ability to meet their commitments and to demonstrate their input across the range of sectors, functions and capabilities should be developed. This should be used and reviewed regularly, and clear actions and processes should be established to respond to instances where a jurisdiction or industry does not comply with the agreed commitments.

1.5 Increased and more innovative communication, engagement, education and marketing should be used to increase stakeholder and the general community's understanding of biosecurity and their biosecurity roles and responsibilities, particularly for our non-government biosecurity partners.

1.6 An evaluation program is developed to assess the impact of programs delivered to support the national biosecurity system.

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

Comment:

The IGAB is a well-constructed document that provides direction to its government parties about how to continue to build a robust national biosecurity system. The IGAB is available on the Commonwealth Government's website. Many documents that support delivery of the priority reforms (listed in the IGAB Schedules) may be harder to find.

Recommendations:

We recommend that:

2.1 Documents that support the delivery of the IGAB are made available to the public and other stakeholders.

2.2 The NBC and sectoral annual work plans and progress against these plans should be made public.

2.3 Jurisdictions and industries should also be encouraged to publish their work plans to demonstrate how they are contributing to the development and delivery of our national biosecurity system.

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?*

Comment:

The IGAB is a government to government agreement that references roles for other partners and stakeholders but does not elaborate on others' roles and responsibilities.

At the time of writing the IGAB, AHA and PHA were seen as the conduit for government to Industry coordination and cooperation. This is still the case.

The IGAB was seen as a mechanism for improving the cooperation and effectiveness of government parties within the primary industries, natural resources and environmental sectors. Since the implementation of the IGAB, other partners and stakeholders such as industry, environmental bodies, non-government organisations and community groups have increasingly recognised the importance of the national biosecurity system and have expressed an interest in being part of a national biosecurity agreement of some sort. This is one measure of how successful the IGAB has been to date; others are keen to be involved.

Recommendations:

We recommend that:

3.1 Parts of the IGAB could be used as the basis for the development of an all-inclusive **national biosecurity agreement**. This agreement should include a clear outline of the roles and responsibilities of all. So that it is easily understood, the language and explanations used should be targeted at the general public.

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?

Comment:

Yes.

However, presently, the IGAB says that it 'describes the key components and features for the national biosecurity system, primarily for animal and plant pests and diseases in both aquatic and terrestrial environments, including pest animals, weeds and zoonotic diseases – those diseases that are naturally transmitted between **vertebrate** animals and humans. Human biosecurity arrangements are not covered under this Agreement as they are covered by existing health related arrangements between governments' (section 2.2 (ii)).

The intention of this clause was to remove pests and diseases which are transmitted from person-to-person as these are the responsibility of human health agencies. With the increasing prevalence of diseases spread from insects to people (for example, diseases from ticks, Dengue virus and Zika virus), there will inevitably need to be more planning and coordination between human health and biosecurity officials to prepare for and respond to outbreaks of these kinds.

The establishment of 'one health' relationships will also allow us to maximise the return on our surveillance, diagnostic, preparedness, response and recovery arrangements and glean useful data about our biosecurity risks from non-traditional sources.

Recommendations:

We recommend that:

4.1 Consideration is given to expanding the scope of the IGAB (and any supporting documents) to cover diseases that are transmitted to humans from non-vertebrate animals as well as vertebrates.

4.2 Consideration is given to the best way of integrating human, environmental, animal and plant surveillance data to develop a multi-directional data sharing and intelligence network.

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?

Comment:

We consider the most significant current and future biosecurity risks to be:

a) failure to adequately describe roles and responsibilities, identify those responsible for their implementation, develop partnerships and ensure implementation will result in system failure.

b) failure to sufficiently promote the benefits of the Australian biosecurity system will result in lost opportunities to harness and increase capacity and capability across the community and exploit new markets.

c) failure to adequately resource biosecurity related activities will have adverse impacts on Australia's economy, environment and community.

d) failure to adequately identify, prioritise and treat biosecurity risks both geographically and across the sectors will result in a misalignment of activities and resources.

e) failure to harmonise policies, procedures, legislation and regulation across Australia will continue to negatively impact on Australia's economy, environment and community.

f) failure to undertake sufficient pre-border and post border surveillance will undermine market access negotiations and emergency pest and disease responses.

g) failure to support sufficient biosecurity scientific research will adversely impact on Australia's ability to be innovative and remain competitive.

h) the expanding use of e-trading and increasing international transport and movement of goods and people will increase the risk of diseases and pests entering Australia.

While some of these risks and priorities are covered within the existing schedules to the IGAB, there is an opportunity for us to work together with all levels of government, industry and the community to develop a higher level of maturity to respond to these issues.

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?

Comment:

No.

The definition of biosecurity and its usage in Australia has been refined over the last 10 years to mean 'the protection of the economy, environment and community from the negative impacts of pests, diseases and weeds' (NSW Biosecurity Strategy) or 'Biosecurity is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading' (IGAB).

In this context, the economic benefits derived are the result of our efforts to maintain or access new markets for our agricultural products, and to protect our animal and plant production. It also includes the economic and other benefits we derive from protecting our environment from biodiversity losses and reduced environmental contamination from chemicals used to treat biosecurity pests, diseases and weeds. A good national biosecurity

system will also provide benefits to the community by maintaining social amenity, protecting cultural heritage, human health and, producing safe food.

In order to achieve these outcomes, a strong national biosecurity system will have processes in place to ensure the following capabilities can be delivered:

- Strategic planning and policy development
- Organisation and management
- Legislation, regulation and compliance
- Service capability and capacity
- Surveillance
- Tracing
- Emergency prevention, preparedness, response and recovery
- Information management
- Communication, engagement, consultation and education; and
- Research and development priorities.

Recommendations:

6.1 That the priority reforms of the National engagement and communication framework (schedule 6 of the IGAB) is implemented in order to better communicate the scope and importance of biosecurity.

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?

Comment:

An underlying principle within the IGAB and most jurisdictional biosecurity strategies is that 'Biosecurity is a shared-responsibility between all governments, industry, natural resource managers, custodians or users and the community' (section 4.1 (i)). At the time of writing the IGAB, this principle was not as widely accepted as it is now.

Through the work undertaken by government and others since then, the level of understanding of biosecurity has increased in some quarters and some have recognised that a failure to manage biosecurity risks can have major and catastrophic impacts on our economy, environment and the community.

As a result there has been an increasing interest by some stakeholders in being more involved in the management of these biosecurity risks. This has been a beneficial outcome and creates the ideal opportunity to further educate and expand on the understanding of other non-government stakeholders' roles and responsibilities and to more formally document these in other agreements, strategies, policies and procedures.

It also means that we need to expand the methods and structures we use to communicate and engage with non-government stakeholders.

Recommendations:

Refer to recommendation 1.4 and recommendation 3.1.

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?

Comment:

There is a need for a **national biosecurity statement of intent** (national statement) which is understood and supported by as many stakeholders as possible. This national statement should be as short as possible however it should outline what our national biosecurity system is all about, including the scope and the principles which will inform the operation of the system.

Parts of the IGAB could be used as the basis for the development of this all-inclusive national and overarching statement. The IGAB provides an excellent outline of the principles and key components of what a national biosecurity system should include within sections 1 Preamble; 3 National Goals and Objective; 4 Principles; 5 Key Components and Features; and parts of 2 Purpose of the Agreement.

All other biosecurity documents such as strategies, agreements, policies and procedures would then be linked back to this national statement. This would include the IGAB and AHA and PHA constitutions for government to industry arrangements, emergency response deeds and agreements and state and territory government biosecurity strategies, and other areas as they are documented.

The development of a national biosecurity strategy may be justified in the medium to longer term but this requires further consideration as to its purpose and its potential audience. The development of a national biosecurity strategy would take a considerable amount of time and effort and may eventuate as part of a plan for the future.

Each jurisdiction with the exception of the Commonwealth has a state or territory biosecurity strategy. These vary in scope and content according to when they were developed but each new strategy has built on the last version and has adopted more of the principles and priorities listed in the IGAB.

In addition to the existing state and territory strategies, a **Commonwealth Government biosecurity strategy** should explicitly address the Commonwealth's roles and responsibilities within the national system. A national biosecurity statement of intent combined with Commonwealth, state and territory biosecurity strategies that address the full biosecurity spectrum (economy, environment and community) should be sufficient to underpin the national biosecurity system until such time as agreement is reached on the need for a national strategy.

Recommendations:

We recommend that:

8.1 A national biosecurity statement of intent is developed and published in consultation with industry, environmental stakeholders and the community.

8.2 A Commonwealth Government biosecurity strategy that explicitly addresses the Commonwealth's roles and responsibilities within the national system is developed and published.

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?

Comment:

In recent years there have been improvements in the understanding of biosecurity by some stakeholders. Evidence of this is in the broader use of the term 'biosecurity' now when compared to 5 or 10 years ago however there is still a long way to go before biosecurity becomes a widely used term and its importance is clearly and consistently understood. One of NSW's goals is to have everyone understand what biosecurity is, why it is important and what their roles and responsibilities are.

Australia is in a unique position with respect to our biosecurity status and the effect it has on our economy, environment and community. In order to protect our biosecurity status we need to ensure people of all ages and across all communities are aware of the importance of biosecurity and the roles and responsibilities each of us have in protecting Australia's biosecurity status. Currently there are few data sets related to stakeholder understanding of biosecurity roles and responsibilities. Improving understanding in this area would allow for improved targeting of education and awareness programs as well as the ability to benchmark changes in understanding over time. This is particularly relevant with the introduction of new biosecurity legislation and regulation.

Recommendations:

We recommend that:

9.1 Research is undertaken to benchmark understanding, identify appropriate communication methods for different stakeholder groups to improve understanding of stakeholder knowledge of biosecurity and biosecurity management practices to better inform decision making.

Refer also to recommendation 1.4.

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?

Comment:

The IGAB identifies that strengthening partnership arrangements between government, industry and the community is an opportunity to grow the national biosecurity system. While AHA and PHA have worked hard to contribute to an effective national biosecurity system, the review paper notes that some industry bodies and sectors are feeling 'left out'.

This includes organisations that represent primary industries and bodies that represent the environment. We need to increase the involvement of non-government stakeholders in decision making and delivery of biosecurity activities if our national biosecurity system is to be a success. Government cannot and should not be responsible for all biosecurity actions. Biosecurity is a shared responsibility.

To further reinforce the individual's roles and responsibilities, government needs to review and develop legislation and regulation that encourages industries and the communities to be responsible for biosecurity outcomes (for example, the NSW and Queensland Biosecurity Acts are both underpinned by a General Biosecurity Duty as well as offering flexibility in achieving biosecurity outcomes without government involvement).

The inclusion of industry in the decision making processes under the EADRA and EPPRD provide strong evidence of the benefits of joint decision making. These include better informed decisions, joint ownership of decisions, reduced costs and shared funding. Joint decision making also provides greater capacity and capability in responding to and managing threats.

Mechanisms for increasing the involvement of industry groups in biosecurity discussions and decision making exist through AHA and PHA however some industries believe greater industry representation is required. AHA and PHA representatives attend NBC meetings however industries do not see this as adequate. An additional challenge for the national biosecurity system is communicating with and involving environmental and community groups in decision making.

The NBC was established under the IGAB to coordinate government biosecurity activities across the economy, environment and community. In order to achieve this, two members from each jurisdiction, one from primary industries and one from the environment department of each state and territory were initially appointed. Unfortunately as time progressed, there appears to have been less involvement from environmental agencies in some jurisdictions.

It is imperative that government agencies work with each other to strengthen our national biosecurity system. The NSW environmental agency (the Office of Environment and Heritage), and our agricultural agency (Department of Primary Industries) maintains a close relationship. This cooperation provides opportunities for each agency to benefit from the capacity and knowledge base of the other organisation, consider issues at an earlier point, remove duplication, and deliver collaborative outcomes.

The national biosecurity system needs to adequately address the economic, environment and community issues and each jurisdiction needs to work with their stakeholders to deliver full participation.

The NSW Biosecurity Strategy was launched in May 2013. Under Goal 1: Biosecurity is a shared responsibility, there are two outcomes:

1.1 Improved community engagement in biosecurity management and
1.2 Stronger partnerships across the biosecurity spectrum.

Strategies for implementing these outcomes include working more closely with environmental and community groups and involving representatives of these groups in decision making.

For example, as part of achieving these outcomes, the NSW Minister for Primary Industries has established an independent Ministerial Biosecurity Advisory Committee with environmental and primary industry government and non-government representatives, to help guide the development and implementation of the new NSW Biosecurity Act.

The Natural Resources Commission has conducted a high level review of the management of weeds and invasive pests in NSW. Local Land Services and representatives of local government

are presently considering how biosecurity planning and implementation is being undertaken at regional levels. Regional committees that include community and environmental members have been established to determine regional priorities. All of these activities and reforms are aimed at increasing local and regional participation in decision making while also ensuring that national and state biosecurity priorities are addressed.

As part of dealing with biosecurity as a whole, it is essential that within government there is a common understanding of who takes the lead in coordinating biosecurity planning and operational activities and that all aspects of biosecurity that relate to the economy, environment and the community are considered and addressed.

In NSW, the Department of Primary Industries Biosecurity and Food Safety Branch is responsible for coordination of biosecurity across the whole of government and works closely with our central agencies, environmental agencies, health department, regional organisations (Local Land Services) and local government. The department also has strong relationships with industry, environmental and community groups.

Recommendations:

We recommend that:

10.1 Jurisdictional governments develop legislation and regulation that encourages industries and communities to be responsible for biosecurity outcomes.

10.2 Discussions are held at the national level with non-government, industry and environmental bodies to determine the best ways to increase their involvement, and to provide opportunities to:

- provide feedback about how communications can be improved;
- provide input into prioritisation of issues
- contribute to decision making processes; and
- contribute to the development and implementation of strategies, action plans and work plans.

10.3 NBC consider how best to ensure that each jurisdiction represents its primary industries, natural resources and environmental stakeholder concerns.

See also recommendation 1.4.

Funding biosecurity

NSW supports the involvement of industry, environmental bodies and the community in any discussions and decisions about how we fund and invest in building a stronger framework for biosecurity.

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?

Comment:

Yes.

The IGAB investment principles are providing a workable framework for investment and are currently meeting the needs of Australia's national biosecurity system.

Yes. In principle the framework will continue to meet the needs of Australia's national biosecurity system into the future, however scoping of future investment needs should be undertaken.

Recommendations:

We recommend that:

11.1 A scoping exercise be undertaken to examine potential future investment framework requirements.

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.*

Comment:

Investment can be better targeted to areas providing the greatest return.

Recent work undertaken by the NBC as part of activities relating to the national decision-making and investment framework (Schedule 2), considers where on the generalised invasion curve resources are currently invested. Further information is required however from industry and other groups before a full understanding of the total biosecurity investment and spread is fully understood.

Further work under this Schedule has been undertaken by Professor Tom Kompass from the Australian National University. This work is focused on determining where the best returns on investment can be achieved.

Government investment is increasingly being focused in areas where benefits to the public are returned. In the case of biosecurity, this is in the prevention, eradication and containment phases of the invasion curve, but also includes some asset based protection, particularly for the environment and community.

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

Comment:

The IGAB provides an excellent outline of the principles and key components of what a national biosecurity system should include. These principles outline the need for a risk management approach that will allow risks to be identified, treatments to be determined and priorities to be set.

As part of implementing a framework that addresses investments, it is important that government, industry, environmental groups and the community are involved in the discussion around defining these risks, their management and resourcing. The framework should provide for efficiency, be cost effective, consider the return on investment and should balance the economic, environmental and social outcomes.

Recommendations:

We recommend that:

13.1 Risk management and achieving an optimum return on investment continues to be the basis for investment decisions.

13.2 Government, industry, environmental groups and the community are all involved in the discussion around defining these risks, their management and resourcing.

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?*

Comment:

The IGAB provides the framework and principles for biosecurity funding and these have been implemented more uniformly across the national biosecurity system since the creation of IGAB.

In particular Section 4.1 (vi) says 'Relevant parties contribute to the cost of biosecurity activities: (a) Risk creators and 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' (section 4.1 (vi)) has provided guidance for funding contributions.

This is consistent with the cost recovery principles outlined in the Australian Government's Cost Recovery Guidelines.

NSW has further developed these principles in the NSW Biosecurity Threat Decision Tree to guide investment.

The existing emergency response deeds, EADRA, EPPRD and NEBRA have provided a solid base for the national biosecurity system since their development and implementation and there are established mechanisms for refining these over time.

These emergency deeds and agreements provide certainty of investment responsibility for both government and industry. When a biosecurity threat is first identified, this framework allows for fast decision making, clear lines of responsibility, and shared understanding of funding arrangements.

There are a number of biosecurity sectors that are not yet covered by these agreements or deeds. Some of these are presently being considered (for example, aquaculture pests and disease and exotic weed incursions). The exotic weeds incursion process presently being discussed is an important step in moving towards an agreement that will allow both plant and animal industries to contribute to a biosecurity threat that impacts on both of those industries.

The recent negotiations to share the costs of the eradication of Red Witch Weed from Queensland and the development of a new response agreement for exotic weeds are positive examples of where the costs may be spread across a great number of risk creators, beneficiaries and the government while at the same time ensuring that costs are kept to a minimum.

The creation of the NEBRA has given certainty as to how an environmental or public good biosecurity threat will be addressed however there is often a lack of certainty as to where these responses will be funded from. Each jurisdiction needs to ensure that there are arrangements in place to fund national environmental biosecurity responses eg establish contingency funds to allow early and adequate response to biosecurity threats where the benefit is primarily a public good.

As stated in the IGAB review discussion paper, the best return on investment is from activities aimed at preparing for, and preventing a biosecurity incident. The paper also notes that industry and political factors can drive the need for investment in ongoing management of pests and diseases. Where this is required, cooperative investment and action increases the return on investment for management activities.

Recommendations:

We recommend that:

14.1 The national biosecurity system continues to implement the cost recovery principles set out in the Australian Government's Cost Recovery Guidelines[1], and the NSW Biosecurity Threat Decision Tree[2].

14.2 The review team consider the NSW Local Land Services model of ratepayer and government funding as an example of a baseline model for how joint funding and decision making for ongoing biosecurity, emergency, agricultural production and natural resource management can be achieved.

14.3 NBC continue its work to develop national agreements that address high risk, high impact issues and that are consistent between sectors so that there are agreed processes to ensure the best possible outcome with respect to biosecurity threats.

14.4 National and jurisdictional contingency funds are established to allow early and adequate responses to biosecurity threats where the benefit is primarily a public good (for example: environmental pests and diseases).

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?

Comment:

The concept of co-investment on the basis of risk creators, beneficiaries and the public good is not new but it has not been applied uniformly across the Australian biosecurity system. The IGAB and the NSW biosecurity threat decision tree make it clear that this is now accepted policy and that it should apply wherever possible.

There should be an objective to establish flexible, responsive pathways to ongoing, equitable co-investment from industry and government. Cost recovery models should be efficient, effective, transparent, and easy for industry to understand and participate in. We support the involvement of industry in decisions to establish, administer and report on cost recovery mechanisms.

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[1] https://www.finance.gov.au/sites/default/files/australian-government-cost-recovery-guidelines.pdf

[2] http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/467699/NSW-biosecurity-strategy-2013-2021.pdf

One of the major national risk creator groups that do not currently contribute to the costs of preventing or mitigating biosecurity threats in Australia are incoming passengers. NSW understands that the New Zealand government has implemented an incoming passenger levy for the express purposes of funding national biosecurity risk management. This has been considered in Australia in the past but has not been implemented.

Recommendations:

We recommend that:

15.1 Further efforts are made to ensure that all risk creators and program beneficiaries are captured in the design and implementation of cost recovery mechanisms, while taking into account the industries which are already paying substantial rates, levies and fees.

15.2 Establishment of an incoming passenger levy be revisited as a legitimate method of targeting risk creators to fund future biosecurity risk management across Australia.

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?

Comment:

Yes.

Market access and the impact of pests and disease on primary production are key components of the economic impacts covered by IGAB. In addition to this, the agencies responsible for biosecurity across all Australian jurisdictions are primary industry agencies. There are also strong arrangements in the government and primary industry spaces through the joint government industry companies of AHA and PHA all of which concentrate heavily on market access issues.

Recent developments through the Primary Industries Trade and Market Access Development Taskforce, a sub-committee of the Agricultural Senior Officers' Committee, has seen increased cooperation between the jurisdictions to identify new market opportunities and to overcome market access issues. This has seen governments applying resources in a co-ordinated, more efficient way to set priorities for and accelerate market access negotiations.

Australia's biosecurity status and processes have enabled us to retain market access and command premium prices in export markets against competitors with lower costs of production. Our reputation for producing clean and safe food and fibre is well recognised by our international customers who are willing to pay a premium to secure it. This in turn provides better returns for our farmers and food manufacturers and is underpinned by our biosecurity status.

Incidents of temporary suspension for Australia's market access are rare, especially in contrast to the situation for competing exporting nations, and this is both testament to our biosecurity processes and an imperative to maintain them.

The protection of the environment is also an important consideration. The NSW Biosecurity Strategy clearly articulates that NSW invests in biosecurity across the economy, environment and community and our systems and our results demonstrate that this is the case (for

example, our rapid response and successful eradication of red imported fire ant from Port Botany, and the identification of the novel disease causing agent killing turtles in the Bellingen River including the subsequent development of a program to save the turtles).

There is wealth of knowledge and capability already embedded within the primary industries agencies so when environmental risks are identified, these resources can be mobilised to respond and complement knowledge and capability from within the environmental portfolios.

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?

Comment:

Our national biosecurity system allows us to use our biosecurity status to access export markets.

NSW and Queensland's new Biosecurity Acts both allow more flexible arrangements such as self-auditing or third party auditing to occur. These are examples of how costs can be reduced without increasing risk. The NSW legislation also provides a framework for certification that can be expanded to industries other than the plant industry.

Communication and education of the Australian population as to the importance of biosecurity will help ensure that they are prepared to support biosecurity activities when they are needed. This will help to prevent, detect and respond to biosecurity incidents at the earliest possible interval.

Recommendations:

We recommend that:

17.1 The IGAB partners continue to work with industry to create increased opportunities and new markets for export of our commodities by:

- Identifying biosecurity related trade limitations and agreeing to priorities and processes for overcoming these issues
- Understanding what we need to do to demonstrate freedom from biosecurity threats to those markets
- Using available data (both presence and absence) to build a cohesive picture of status against priority trade issues
- Building producer acceptance and participation in status based programs; and
- Strengthening surveillance networks utilising government and non-government organisations.

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

Comment:

The IGAB national goals and objectives (section 5.2) commit the parties to strengthening the national biosecurity system based on a number of components including 'a comprehensive national surveillance and diagnostic system that provides for early detection and accurate and timely diagnosis of pests and diseases' (section 5.2 (v)).

The National Surveillance and Diagnostics Framework (the framework) was developed by the IGAB Schedule 4 working group to provide an integrated approach to the funding and management of these activities.

Its aim is to ensure that surveillance and diagnostics are supported by risk based decision making to help prioritise the allocation of government resources and investment to areas of greatest return, and to maximise the use of existing capability and infrastructure.

Under the IGAB, governments have committed to developing a national surveillance and diagnostic system that builds on current arrangements and seeks to ensure that all affected parties are involved and bear their share of costs from these activities. With respect to diagnostics this will require:

a) strategies to ensure early detection and monitoring of pest/disease status to protect the economy, environment and community from the impact of pest or disease incursions, and support the maintenance and development of international markets for Australian animals, plants and their genetic material, and food and fibre products

b) efficient use of diagnostic capability and infrastructure to minimise unnecessary duplication of effort across jurisdictions.

A recent assessment of progress against this framework reported that there is generally satisfactory progress with the development or refinement of national surveillance strategies in each sector, consistent with the framework. However, no sector has adopted a strong national diagnostic capability approach such as outlined in the framework. There is not a national agreement or process that requires, or provides national support for jurisdictions to maintain specialist capability in the national interest.

Recommendations:

We recommend that:

18.1 Further discussion with all Australian biosecurity stakeholders is undertaken to implement the national diagnostic framework across all sectors to maintain and improve our biosecurity status.

18.2 Development and implementation of a national agreement or process that provides national support for jurisdictions to maintain specialist biosecurity capability.

The role of research and innovation

Investing in the future

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.

Comment:

Priority should be given to continued investment across the priority reform areas listed in the IGAB schedules. Schedule 8 identifies the priority reform areas for national biosecurity research, development and extension.

By its very nature, science and the innovation that drives discovery is constantly changing, and in the next 5, 10 and 20 year's technology that is available to us now may be completely

superseded and/or obsolete. To maintain and improve the national biosecurity system, the science and research that drives the biosecurity policy and control decisions must be kept current and attract those who initiate and manage such changes.

The national biosecurity system must be flexible with the ability to adapt and adjust to emerging threats, while also providing effective control of existing biosecurity issues. This flexibility includes having the right people trained in current and emerging technologies, excellent facilities able to handle small and large scale incursions or outbreaks and sufficient funding to allow for emerging and new areas of discovery.

In addition, sufficient capital to maintain biosecurity facilities and to enable like for like funding with collaborative partners will be essential.

Some examples of areas where Research and Innovation will contribute over the next 20 years are provided below:

Research and innovation

- A large component of the research and innovation portfolio is driving technology. This will remain a valid objective into the future. Emerging technologies include:
    - Gene technology - genomics, proteomics, bioinformatics, etc
    - Nanotechnology - rapid detection, plant absorption systems
    - Big Data - systems biology, powerful analysis tools
    - Synthetic biology - synthesis of drugs, vaccines and even organisms
    - Robotics and artificial intelligence - drone surveillance and remote sensing
    - Drone surveillance of remote areas to provide regular monitoring for incursions of pests and weeds
    - Remote sensing will enable monitoring of land areas around ports and peri urban areas.
    - Point of need or field testing which is under development now and will be widely utilised into the future for the on-site testing of animal and plant biosecurity threats at point of discovery and point of action.
- Computer power and capacity for analysis is growing at a remarkable rate, including:
    - Analysis of large/big data sets to develop a systems approach to biosecurity threat preparedness and response
    - Generation of system maps to produce layers of data to build information pathways that can lead to better preparedness and understanding of transmission and spread of biosecurity threats
    - Greatly improved laboratory testing capability with high throughput capability and multi agent testing.
- Advances in social science will support improvements in our understanding of the drivers of behaviour and the cause of noncompliance and many biosecurity threats.
- The CSIRO identified 6 megatrends and these will be some of the drivers of which we need to be aware in a changing biosecurity landscape.

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

Comment:

Continued investment in strategic, collaborative research which is targeted at the highest biosecurity risks will underpin our capacity to meet future biosecurity challenges; particularly

where they are large scale or rapidly evolving. We recommend that further attention is given to:

- Delivering effective industry/government/tertiary institution collaborations and partnerships
- Sharing the outcome of research projects
- Developing robust processes to direct resources to priority research and development projects
- Minimising duplication through strategic planning for research
- Investigating new and novel approaches to funding research and innovation such as encouraging philanthropic groups to fund projects for example, Gates Foundation.

There are already a range of important research and development projects underway which will support innovation and strengthen our capacity to identify and respond to biosecurity threats.

Recommendations:

We recommend that:

20.1 Consideration is given to how we might build capacity within our research community so that there is continuity of research and knowledge transfer as researchers retire or leave the field.

20.2 Consideration is given to providing incentive funding for collaborative partnerships to bring together different disciplines to help manage persistent and emerging biosecurity threats.

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

Comment:

The advances in communications and computing power have opened up a new world of instant access and high expectations of consumers, farmers and governments. These advances also provide us with enhanced capacity for data collection, transmission and utilisation, and will enable far more efficient early warning, detection, control and management of biosecurity threats.

It is vital that, as national biosecurity partners, we invest in the right people who have the imagination, drive and curiosity to deliver innovative responses to a challenging global environment. Increasing, the social science field will provide understanding of behavioural issues associated with biosecurity threats and will help us to design novel approaches to pre-emptive management.

The commitment from government to maintain and improve existing biosecurity facilities, and to build and retain a skilled workforce will be critical to the success of a sustainable national biosecurity system.

The need and expectation for data sharing and the opportunities to collaborate with industry and other partners should be developed through targeted funding initiatives.

Innovation and new technology are providing a range of improved communication tools (including innovative uses of social media), data collection and sharing methodology and

science and research in diagnostics and analytics that are all capable of contributing to increases in efficacy across the response curve.

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?

Comment:

The economic benefits of Australia's biosecurity system can and should be measured regularly. These benefits should include returns on biosecurity investments in primary industries and its products, as well as benefits to the environment and community.

Recent ABARES reports have highlighted the importance of biosecurity in maintaining returns to broad acre cropping in the order of $17,500 per farm. There are estimates of losses to the Australian economy of large scale agricultural incursions such as FMD and Karnal Bunt. More of these assessments need to be undertaken to demonstrate the importance of being able to keep exotic pests and diseases out of Australia and the benefit of eradicating them where justified.

The area of most difficulty in estimating economic returns is to the environment and the community. Effort should be made to develop a national methodology for determining benefits derived from biosecurity. Environmental returns from the protection of biodiversity and natural resources are also beneficial outcomes from biosecurity and these impacts should also be measured and communicated.

Recommendations:

We recommend that:

22.1 A research program is implemented to determine the economic benefits delivered by Australia's biosecurity system and provide evidence for targeting effective resource allocations and to identify system improvements.

22.2 A research program be developed and implemented that measures environmental and community outcomes achieved from the national biosecurity system.

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?

Comment:

All jurisdictions, industries and relevant non-government organisations hold data of relevance to the national biosecurity system.

Data standards for sectoral groups should remain a high priority to ensure data sets are comparable for analysis. A good example is the national weeds metadata standard. The weeds metadata standards align to biosecurity activities such as inspections, compliance, extension, and control activities allowing state and national views to be presented in a meaningful way.

Interoperability of systems is also important to allow near real-time and seamless data sharing. Modern technology platforms allow interoperability and all jurisdictions should be encouraged to upgrade their technology where required.

Wherever possible, data should be spatially enabled to allow the location of an activity or, detection of an incursion to be rapidly mapped.

Recommendations:

We recommend that:

23.1 Data sharing standards, agreements and capability need to be progressed at the national level.

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

Comment:

Industry is a key manager of biosecurity related data.

An initiative around high end analytics, big data and biosecurity intelligence would identify key data sets and improve our understanding of pathways, risk and impact. This work would in turn guide investment in biosecurity activities such as surveillance, research and diagnostics.

Recommendations:

We recommend that:

24.1 Governments and industry work together to identify key datasets and to resolve the barriers to data sharing (for example, legal, cultural, financial, technology and standards).