
Review of the Intergovernmental Agreement on Biosecurity Draft Report

Submission of the Invasive Species Council

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Endorsed by:



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Introduction and summary of responses to recommendations

The Invasive species Council (ISC) campaigns for better laws and policies to protect the Australian environment from weeds, feral animals and other invasive species. ISC is pleased to see significant emphasis placed on environmental biosecurity in the draft report. The panel has rightly identified environmental biosecurity as an element of the country's biosecurity system warranting significantly increased attention and effort.

The report also rightly emphasises the need for greater transparency, and for greater engagement of the community in biosecurity. These aspects are important to build a system that expands its focus to more fully encompass environmental matters, and to give the community and the jurisdictions that are party to the Intergovernmental Agreement on Biosecurity (IGAB) confidence in the system's direction and performance.

The proposed structural changes to create a strong focus on environment biosecurity within the federal government and the National Biosecurity Committee are strongly welcomed. However, we are concerned that there is no credible solution to assign responsibility for environmental biosecurity preparedness and urge that this be rectified in the panel's final report. A new, stand-alone, permanent biosecurity research and innovation body with significant focus and capacity in environmental matters will further strengthen the system.

We offer our comments only on those draft recommendations relevant to environmental biosecurity and, following this, on the panel's feedback questions. Our comments include our own recommendations to the panel of ways to further strengthen the final review report. Our responses and recommendations are summarised in Table 1.

Most of ISC's recommendations about strengthening or modifying the panel's recommendations derive from our understanding of the differences between environmental biosecurity and biosecurity aimed at protecting agricultural assets. The scale and significance of these differences (outlined below) renders the mere addition of environmental responsibilities to existing biosecurity institutions ineffective. Instead, it is essential to develop structures, institutions, principles and policies that are environment-specific.

Differences between environmental and agricultural biosecurity

- **The values to be protected:** biodiversity and environmental health: Conservation requires a biosecurity focus on hundreds of thousands of species, from microbes to macropods, and their interactions that constitute ecosystems and ecosystem processes in terrestrial, freshwater and marine systems. In contrast, industry biosecurity is mostly focused on protecting individual species that are of economic value and number no more than a few dozen (except for the nursery and aquarium industries, which use a wider although largely replaceable range of species). Conservation requirements are increasingly landscape-scale and blind to tenure in contrast to industry biosecurity.

The values at stake for industry are quantifiable in economic terms and are sometimes replaceable (by new breeds, species or enterprises). The values at stake in conservation are not replaceable – each species and ecosystem is important – and cannot be quantified in economic terms. This means they are often undervalued when biosecurity priorities are decided.

- **Invasive species threats:** scale and complexity: Because of the diversity of species and ecological communities to protect, there are far more invasive species that are of threat to environmental values, far too many to compile into a target list. Both environmental and industry threats mostly derive from global and domestic commerce, but a greater proportion of environmental threats are deliberate imports because of their perceived economic or social value. Environmental threats are typically far more complex, involving direct and indirect impacts arising from changes in biological and physical interactions of a great number of species.
- **State of knowledge:** Due to commercial incentives, much more is known about cultivated species and the invasive threats to them than about biodiversity and invasive threats. The lack of knowledge about our native biota, particularly invertebrates and microbes, means that most invasive species impacts are not documented or monitored. The impacts of even high profile species are poorly known.
- **Predictability and timeframes:** While impacts on cultivated species can be predicted with reasonable accuracy, there are high levels of uncertainty about impacts in the natural environment due to complex interactions, long timeframes (decadal to millennial) and lack of knowledge. Many impacts are facilitated by or synergistic with other threats, such as fragmentation and climate change. Invasive impacts in the natural environment may not be observed for decades due to lag effects, lack of monitoring or their insidious nature. A cow killed by a new pathogen is much more easily detected than a dead bird in a forest. The combination of great uncertainties, long timeframes, limited management options and far reaching impacts requires an especially precautionary and defensive approach in environmental biosecurity.
- **Management approaches and options:** There are many more management options in relatively simple, delimited agricultural systems than there are in complex natural environments. For example, in response to the recently introduced myrtle rust, plant industries can use fungicides, breed resistant varieties or use tolerant species, none of which are options in the natural environment. In many natural situations, weeds cannot be controlled with broadacre mechanical or chemical control. Australia's post border biosecurity (managed by the states and territories) is more reactive rather than defensive, focussed mostly on controlling or proscribing a small subset of listed invasive species that are causing proven harm. A much more precautionary approach is warranted because options for control once a species is established are very limited.
- **Stakeholders and resources:** There are commercial incentives for industry management of invasive species but environmental biosecurity relies on consistent government and community investment for the public good. Commercial incentives and greater government spending also mean that industry biosecurity is much better resourced than environmental biosecurity. A multitude of stakeholders, often with conflicting agendas, makes environmental biosecurity a much more socially and politically challenging policy area than industry biosecurity. Some of the most damaging environmental invaders are ignored because of economic or social reasons that are rarely subject to cost benefit analysis – many aquarium fish, pasture grasses and garden plants for example.

Table 1: Summary of Invasive Species Council responses and/or recommendations

No.	Panel Recommendation (from draft report)	Invasive Species Council response and/or recommendation
1	<i>The NBC and the proposed Industry and Community Advisory Committee, through an open, transparent and collaborative process, should lead the development of a draft National Statement of Intent for public consultation...</i>	Retain recommendation 1, and in the final report of the IGAB review, recommend the preparation of a national policy statement on environmental biosecurity.
7	<i>IGAB2 should include an explicit commitment by jurisdictions to support financially, decisions agreed to under NEBRA...</i>	Support recommendation 7 Insert 'precautionary' into IGAB review recommendation 7 after 'evidence-based' Create a new IGAB review recommendation that the NEBRA review should take into account eradication uncertainties and the difficulties in undertaking a benefit-cost analysis when considering NEBRA activation
8	<i>Jurisdictions should institute formal arrangements between agriculture and environment agencies to define the objectives of cooperation, leading and support roles, information flows, resources and deliverables...</i>	ISC supports this recommendation.
9	<i>The IGAB should make clearer commitments to environmental biosecurity</i>	Retain recommendation 9, with the addition of 'and plant' to the final dot point in relation to diseases, and reference to a specific program of work to control high and very high risk environmentally invasive species. Recommend that the precautionary principle is included in the IGAB agreement to be taken into account in all environmental biosecurity decisions, in compliance with the CBD. Further recommend that the panel recommend jurisdictions develop agreed guidelines for the practical application of the precautionary principle under IGAB
10	<i>The Australian Government should establish the senior, expert position of Chief Environmental Biosecurity Officer within the environment department. A less preferred option is...</i>	Retain recommendation 10, but delete the 'less preferred' option. The Chief Environmental Biosecurity Officer should be housed in the environment department
11	<i>The NBC should establish and resource a new Environmental Biosecurity Committee (EBC), comprising government and external environment biosecurity experts and representatives from both the animal and plant sectoral committees of the NBC</i>	ISC supports this recommendation.

12	<i>Greater and explicit roles should be developed for AHA and PHA in environmental biosecurity, instituted through amended constitutions and expanded board expertise</i>	ISC strongly opposes this recommendation. Replace recommendation 12 with a recommendation to establish Environment Health Australia or a similar stand-alone collaborative body charged with environmental biosecurity preparations.
13	<i>Jurisdictions should adopt a systematic approach to determine and plan for national priority animal, plant and environmental pests and diseases</i>	Retain recommendation 13 with minor rewording to: (a) include the identification of priority pathways; (b) clarify that all IGAB jurisdictions must apply one consistent systematic approach
14	<i>The NBC should lead five-yearly national-level risk prioritisation for emerging animal, plant and environmental risks and pathways, in partnership with system participants, reporting to AGSOC and AGMIN...</i>	ISC supports recommendation 14, but recommends that the first part of Figure 4 that describes the process for determining environmental pests and diseases be modified so that the knowledge synthesis and strategic foresight steps used to determine environmental risks and pathways is included.
15	<i>The sectoral committees of the NBC, with the endorsement of the NBC, should develop an agreed set of National Biosecurity R&I Priorities, in consultation with system participants and in line with the agreed national priority pests and diseases...</i>	ISC supports this recommendation with the following additions: Recommend the establishment a new stand-alone, permanent entity for cross-sectoral biosecurity R&I with governance structures that include environmental interests and purposes, and with an appropriate funding stream to support environmentally focused research. Recommend that the panel recommends implementation of the National Environment and Community Biosecurity Research, Development and Extension Strategy be fully funded and provided with a delegated coordinating body (ideally either Environment Health Australia or the new R&I body above) and dedicated budget, and that it be regularly reviewed and revised through sectoral and community consultation. Recommend that development of extension and community engagement priorities be recommended in the final review report alongside development of research and innovation priorities.
17	<i>First Ministers should, within IGAB2, identify lead ministers and agencies for biosecurity (assumed to be agriculture or primary industries) and require supporting whole-of-government arrangements to be in place, including through memoranda of understanding</i>	Maintain this recommendation, but remove the assumption that agricultural agencies will take the lead.
20	<i>The NBC should adopt a sub-committee structure that aligns with the revised national biosecurity system objectives and national reform priorities in the IGAB. All NBC working groups and expert groups should be task-specific and, wherever possible, time-limited.</i>	ISC supports this recommendation

21	<i>The NBC should take steps to increase its public profile and openness, including establishing a stand-alone website...</i>	ISC supports this recommendation
22	<i>AGSOC should establish and provide oversight to an independent IGAB Evaluation Program to assess and report on implementation of each jurisdictions' commitments under the IGAB. The evaluations, or a summary of them, should be made publicly available following ministerial consideration</i>	Retain this recommendation, but recommend that evaluations be made publicly available in full
24	<i>The NBC should report annually to AGMIN on its progress of priority reform areas. The NBC's work program and annual report should be made publicly available upon ministerial consideration.</i>	ISC supports this recommendation
25	<i>AGSOC should establish, as a priority, an Industry and Community Advisory Committee to provide advice to the NBC on key policies and reforms</i>	ISC supports this recommendation, but also urges the panel to recommend an equal balance of community and industry members be appointed to the committee
26	<i>The NBC should convene a dedicated annual national Biosecurity Roundtable for AHA and PHA members to provide direct input to the NBC</i>	ISC supports this recommendation, and urges the addition of a recommendation or reference to the need for a similar annual arrangement for community and environmental interests to provide direct input to NBC
27	<i>The NBC and the Industry and Community Advisory Committee, in consultation with other key stakeholders, should revise the National Framework for Cost Sharing Biosecurity Activities to enable its practical application.</i>	ISC supports this recommendation, and urges that the associated text refer to the importance of declaring and managing conflicts of interest
29	<i>The IGAB should include an ongoing commitment to the funding stocktake, with governments publicly reporting their expenditure and the high-level stocktake results under uniform and fully inclusive categories</i>	ISC supports this recommendation
30	<i>All governments should review their current biosecurity expenditure, with a view to redirecting funding into areas that return the highest yields to farmers, industry and the community. This approach will require a planned and coordinated strategy of engagement and communication</i>	ISC supports this recommendation on the proviso that broadened wording is used along the following lines: "...highest yields public good outcomes to farmers, industry, and the community <u>and the environment</u> ".
34	<i>State and territory governments should review their biosecurity cost-recovery arrangements to ensure they are consistent, appropriate and transparent.</i>	ISC supports this recommendation
35	<i>All levels of government could help meet their budgetary challenges by reviewing biosecurity levies and rates/charges currently or potentially applying to system participants. These should be commensurate with agreed national cost sharing principles, which the Review Panel considers should be reviewed.</i>	See response to recommendation 34

36	<i>The NBC should establish a time-limited task group to progress development of a performance framework and performance measures for the national biosecurity system</i>	ISC supports this recommendation
37	<i>The Australian Government should facilitate development of an integrated, national biosecurity information system to provide a common platform for all jurisdictions to share and access biosecurity data and information in the national interest.</i>	ISC supports this recommendation, and urges that it be strengthened by recommending that the design and institution of the information system be completed within two years, under adequate Commonwealth initiative funding
38	<i>Data and knowledge sharing should be a core commitment of jurisdictions under the IGAB. Minimum standards and specifications should be agreed for data sets</i>	ISC supports this recommendation
39	<i>The Australian Government should establish, within the Department of Agriculture and Water Resources, a dedicated National Biosecurity Intelligence Unit...</i>	ISC supports this recommendation, and urges that “and OGTR” be inserted after “AGMIN”, and that consideration be given to the question of whether the intelligence unit would be better housed in an independent location rather than in DAWR
40	<i>Jurisdictions should adopt the proposed new priority reform areas and associated work program for IGAB2, and amend the IGAB in line with proposed revisions</i>	Maintain this recommendation, and strengthen the priority reform areas to give greater prominence to environmental biosecurity (see body of our submission)
F1	<i>The Review Panel seeks feedback on the draft roles and responsibilities of national biosecurity system participants</i>	See our initial submission to the review process, especially our proposal to establish Environment Health Australia.
F2	<i>The Review Panel seeks feedback on the total effort and costs associated with demonstrating area freedom by jurisdictions, and the value of that trade</i>	If it is in industry’s interest to demonstrate area freedom, industry may fund it. Public monies should not be used unless associated with eradication effort in the public interest
F3	<i>The Review Panel seeks feedback on ... options for a new entity for cross-sectoral biosecurity R&I:</i>	ISC prefers option 1 with certain provisos (refer to our response to recommendation 15). Option 2 cannot work.
F4	<i>The Review Panel seeks feedback on the proposed Terms of Reference for the NBC</i>	Terms of reference should include: Establishment of an environmental biosecurity sub-committee, and; To “provide advice on means of reducing the impact of invasive species on Australia’s natural environment to a minimum”.
F5	<i>The Review Panel seeks feedback on ... options to ensure a more rapid-response to an exotic pest or disease incursion...</i>	We believe that both options can be adopted concurrently as necessary (especially for species assessed as posing a high or extreme risk).

Comments on selected recommendations from the draft report

Our comments below are limited to those recommendations that relate to or particularly affect environmental biosecurity.

Recommendation 1 *The NBC and the proposed Industry and Community Advisory Committee, through an open, transparent and collaborative process, should lead the development of a draft National Statement of Intent for public consultation that outlines:*

- *a vision, goal and objectives for the national biosecurity system*
- *principles for managing biosecurity*
- *the meaning and application of ‘shared responsibility’*
- *the roles, responsibilities and commitments of participants, including accountability measures*
- *governance arrangements for the national biosecurity system.*

The process should involve government (incl. local government), industry and community.

ISC supports the intention of this recommendation. However, there is no definition in the draft report of a “statement of intent”, nor description of how that might differ from a strategy or a policy. We assume the panel has chosen not to recommend either a national policy or a national strategy for certain reasons, and we urge the panel to state these reasons and assess the pros and cons of each option , for example by tabulating them against criteria along the lines of the following mock-up:

	Scale from binding to non-binding (1-10)	Potential to conflict with jurisdictions’ own policy-making	Resources required to prepare (resource “diversion”)	Ability to guide and align national biosecurity effort Scale 1 (Hi)-10 (Lo)
National policy statement (with no associated “carrot or stick”)	4	Med-high	Med	4
National strategy (statutory)	5	Med-high	High	2 (NB: does not bind non-govt players)
National strategy (non-statutory)	3	Low-med	Med-High	4
National statement of intent	9	Low	Low-Med	6 NB: softer and more inclusive tool

We can see that a statement of intent – as a briefer and less formal document than a policy or strategy – may suffice for well-developed (i.e. non-environmental) aspects of biosecurity. Being less formal in tone, it may also facilitate a sense of ownership or inclusion among non-government players, including community representatives. But we do not consider it will have sufficient force nor specificity to drive the necessary reforms in environmental biosecurity.

ISC therefore recommends the development of a stand-alone national policy statement on environmental biosecurity. This would provide greater momentum to address the major gaps in environmental biosecurity that the panel has noted. The statement should be developed through an open inclusive process. Aligned with the national statement of intent, it should be a more detailed and prescriptive document, specifying the ways in which Australia will strengthen environmental biosecurity, and the associated roles, responsibilities, outputs, outcomes and milestones.

We note and support the final sentence of this section, urging jurisdictions to support the development of the capacity of those involved in biosecurity.

ISC response/recommendation: Retain recommendation 1 and in the final report of the IGAB review, recommend the preparation of a national policy statement on environmental biosecurity.

Recommendation 7 ***IGAB2 should include an explicit commitment by jurisdictions to support financially, decisions agreed to under NEBRA, but look to put in place systems that ensure decisions are evidence-based and transparent, in keeping with best risk management principles, and that give confidence to governments and the community that funds are being committed wisely and appropriately.***

We strongly agree with this recommendation but urge that ‘precautionary’ be inserted between ‘evidence-based’ and ‘transparent’. The precautionary principle is critical to biodiversity conservation and biosecurity, and is required under the Convention on Biological Diversity (CBD) and national environmental law.

There are many barriers to the National Environmental Biosecurity Response Agreement (NEBRA) being triggered. NEBRA has been adapted from the industry-based agreements, and so its decision-making processes are more suited to well-understood threats, not environmental threats with which limited knowledge and a high level of uncertainty is often associated.

For example, NEBRA requires that eradication be ‘likely’ before parties agree to proceed with an eradication attempt. For some high risk invasive species, the likelihood of success cannot be confidently assessed until the eradication methods are applied and refined in the field. There is also a requirement to show that eradication will be beneficial on the basis of a benefit-cost analysis. For most environmental incursions, this is impractical since there is no acceptable method by which to evaluate environmental costs and benefits in environmental terms and there is often too little information to be specific about the environmental costs of an invasive species.

We recommend that the NEBRA five-year review recommend improvements to the criteria for NEBRA activation, to better take into account the uncertainties associated with eradication methods and the difficulties of applying benefit-cost analyses to environmental biosecurity.

ISC response/recommendation: Support recommendation 7.

ISC response/recommendation: Insert ‘precautionary’ into IGAB review recommendation 7 after ‘evidence-based’.

ISC response/recommendation: ISC recommends that in its final report the panel recommends that the NEBRA review should take into account eradication uncertainties and the difficulties in undertaking benefit-cost analyses when considering NEBRA activation.

Recommendation 8 *Jurisdictions should institute formal arrangements between agriculture and environment agencies to define the objectives of cooperation, leading and support roles, information flows, resources and deliverables. The Australian Government agriculture and environment departments should enter into a Memorandum of Understanding, modelled on those with health and immigration agencies.*

This is an excellent recommendation, fully supported by ISC.

We note the suggestion that environment agencies may have been “let ...off the hook” regarding biosecurity responsibilities due to the 2013 streamlining of Council of Australian Governments (COAG) arrangements. As the last paragraph in the section states, however, environment agencies are not off the hook, as they have lead responsibility for biodiversity conservation, and biosecurity (prevention and mitigation of invasive species threats) is central to biodiversity conservation.

ISC recommendation: Support IGAB review recommendation 8.

Recommendation 9 *The IGAB should make clearer commitments to environmental biosecurity and include:*

- *the principle of ecologically sustainable development*
- *acknowledgement of Australia's international responsibilities under the Convention on Biological Diversity*
- *a program of work to determine, plan and prepare for national priority pests and diseases impacting the environment and native species*
- *a focus on environment and community as well as industry partnerships*
- *invertebrate transmitted diseases as well as animal diseases.*

ISC strongly supports this recommendation.

Given the importance of the precautionary principle as part of the Convention on Biological Diversity (CBD) and as one of the guiding principles for the National Strategy for Ecologically Sustainable Development (ESD), we urge the panel to recommend the specific inclusion of the precautionary principle in the IGAB agreement (see also our response to recommendation 12, below).

The precautionary principle is essential to environmental biosecurity. Article 8(h) of the CBD specifies that the decisions relevant to preventing, eradicating, containing and controlling invasive species are central to states' compliance with this treaty. As the treaty incorporates the precautionary principle, therefore the decision making of signatory states like Australia around invasive species must therefore also do so.

As we say above in characterising the differences between agricultural and environmental biosecurity, 'While impacts on cultivated species can be predicted with reasonable accuracy, there are high levels of uncertainty about impacts in the natural environment due to complex interactions, long timeframes... lack of knowledge. ... The combination of great uncertainties, long timeframes [and] limited management options requires an especially precautionary ...approach...'

All government players with responsibility for environmental biosecurity must apply the precautionary principle in their work both in order to comply with the CBD, and to effectively prevent and mitigate impacts on Australia's biodiversity.

Many decisions within biosecurity are precautionary – for example, the approach of refusing entry to new organisms unless they pass a risk assessment, and elements of the risk assessment process such as requiring a certain threshold of information about risks before determining whether a particular import will be approved. Unfortunately, many other biosecurity decisions relevant to the environment are not precautionary. For example, when

there is uncertainty about the impacts of an organism or about the feasibility of eradication, the usual approach of the National Management Group (or its consultative committee) has been to not proceed with eradication. This was particularly evident in the responses to incursions of myrtle rust, the smooth newt and the Asian honey bee.

The draft report, on page 41, states: “This panel sees no compelling reason to differ” with the Beale review that “the precautionary principle as spelt out in the EPBC Act was ‘unlikely to be consistent with the requirements of the SPS Agreement’”. We make several observations in response to this statement:

- The Beale Review only said that it was “unlikely”, not that it was certain that the World Trade Organisation Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and CBD provisions would prove inconsistent
- Other parties to both agreements have included the precautionary principle or approach in biosecurity laws or policies.
- The inconsistency (if there is one) *already exists* in that Australia has a statute that expresses a commitment to the precautionary principle in assessing the risks of live imports and managing invasive species impacts on matters of national environmental significance such as threatened species (the EPBC Act).
- Application of the precautionary principle is needed to effectively protect Australia’s natural environment from biosecurity threats.

If there is a problem (an inconsistency) here, the appropriate course of action is for the panel to recommend ways of resolving or reconciling it. Otherwise it may appear that the panel is tacitly endorsing non-compliance with Australia’s CBD commitments.

It is also important to provide guidelines about how the principle should be applied in biosecurity practice. Thoughtful guidelines may also be one way to manage any perceptions of inconsistency with the SPS agreement. Although such guidelines are beyond the scope of this submission, ISC would be pleased to provide information and ideas about guidelines for application of the precautionary principle to the panel at a later date.

For clarity we urge that the second dot point of recommendation 9 include the words “*acknowledgement of Australia’s international responsibilities under the Convention on Biological Diversity **and its associated targets and protocols***” [our addition in bold]. We refer here in particular to the Aichi Biodiversity Targets, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.

We urge the panel to recommend the inclusion in the “program of work” of a sub-program to actually *control* high and very high risk environmentally invasive species (not just those of national priority), i.e. to eradicate or contain these species.

In reporting on the effectiveness of environmental biosecurity arrangements the proposed chief environmental biosecurity officer should ensure that not only the arrangements but their outcomes are reported on, including biophysical outcomes.

The final dot point of the issues to be included should add reference to plant diseases, to read, “*invertebrate transmitted diseases as well as animal **and plant** diseases*” (insertion in bold).

ISC response/recommendation:

Retain recommendation 9, with the addition of ‘and plant’ to the final dot point in relation to diseases, and reference to a specific program of work to control high and very high risk environmentally invasive species.

Recommend that the precautionary principle is included in the IGAB agreement to be taken into account in all environmental biosecurity decisions, in compliance with the CBD. Further recommend that the panel recommend jurisdictions develop agreed guidelines for the practical application of the precautionary principle under IGAB.

Recommendation 10 ***The Australian Government should establish the senior, expert position of Chief Environmental Biosecurity Officer within the environment department. A less preferred option is to house the position in the agriculture department. The position should report on the effectiveness of Australia’s environmental biosecurity arrangements and achievements. Reports should be made publicly available.***

This is an excellent recommendation which we support, subject to deleting the ‘less preferred’ option.

The position of Chief Environmental Biosecurity Officer can provide the leadership and focus essential for improving environmental biosecurity. Without a leader, work on environmental biosecurity will continue to be uncoordinated and receive little attention.

The environment department is the most obvious and effective place for this position. This would facilitate the engagement of the environment department and ensure that its resources, expertise and authority are fully utilised. It is noteworthy in this context that the Chief Medical Officer is housed in the Department of Health despite aspects of biosecurity for human health being overseen by the Department of Agriculture and Water Resources (DAWR).

DAWR for obvious reasons has an agricultural culture. An ecological culture and expertise is needed to lift environmental biosecurity from being an 'add-on' to agricultural biosecurity, and this can only be provided by the environment department.

Public reporting on the work of the Chief Environmental Biosecurity Officer will help ensure accountability and measure progress. Such reporting should be at least yearly against work program targets.

ISC response/recommendation: Retain recommendation 10, but delete the 'less preferred' option. The Chief Environmental Biosecurity Officer should be housed in the environment department.

Recommendation 11 *The NBC should establish and resource a new Environmental Biosecurity Committee (EBC), comprising government and external environment biosecurity experts and representatives from both the animal and plant sectoral committees of the NBC, to support the role of the Chief Environmental Biosecurity Officer. The role of the EBC should be reviewed following its work to prioritise national biosecurity risks impacting the environment.*

We strongly support this recommendation as essential to strengthening environmental biosecurity.

For the past five years the National Biosecurity Committee (NBC) has failed to address the deficiencies in environmental biosecurity. One exception – the delivery of NEBRA to respond to new incursions – has been of limited effectiveness because it hasn't taken into account the differences between environmental and agricultural biosecurity. Something needs to change to properly focus NBC on environmental biosecurity threats.

The plant health and animal health committees of NBC do a good job in preparing for and responding to commercial plant and livestock biosecurity threats respectively. The plant health committee has not had a strong focus on invasive ants until the last six months.

The Invasive Plants and Animals Committee has given some attention to vertebrate pests and weeds that may impact on the environment, but has failed to advance work at the national level on several issues, including escaped garden plants and legal and illegal exotic pet birds, reptiles, mammals and fish. The recently exhibited draft Australian Pest Animal Strategy and Australian Weed Strategy are two examples of low ambition and little action by these committees.

The marine pest sectoral committee has been progressing important work on ballast water and biofouling but has not to date adequately represented environmental interests.

A clearly tasked, properly funded and proactively chaired environment biosecurity committee of NBC should take the lead on addressing the shortcomings of Australia's environmental biosecurity. It would work best if federal, state and territory environmental departments played the lead role in the committee's work, in liaison with their agricultural counterparts, and developed their advice in partnership with environmental stakeholders and experts.

This is essential to develop approaches to environmental biosecurity that are consistent with conservation priorities, ecological theory, and to properly engage environmental stakeholders.

It is vital that approaches to environmental biosecurity take account of the differences between agricultural and environmental biosecurity (as outlined in the introduction). Because of these differences, committee members with an ecological understanding of the problems and potential solutions are needed to progress work through an environmental biosecurity committee under NBC.

To examine the suitability of such a change, one needs only to turn it on its head: If the membership and nominal role of the NBC and all of its committees were comprised of only environmental remits, experts and players, would the interests of agricultural biosecurity be well served? The answer is clearly no.

The recommendations in the draft report relating to improved transparency of the NBC and its committees will help ensure that the new committee is vigorous and productive in its role, complementing the roles of other committees.

The work of the plant health and animal health committees can continue as before since they are almost exclusively focused on threats to agriculture, but development of an invasive ants biosecurity plan should be moved to the Environmental Biosecurity Committee. Parts of the work of the Invasive Plants and Animals Committee that have a clear environmental focus such as work on environmental weeds and illegal pets should be referred to the Environmental Biosecurity Committee. Remaining gaps can be identified through the systematic identification of diseases and pests of native plants and native animals (excluding vertebrate pests which are already done) and by developing the necessary biosecurity plans.

A mature approach to the biosecurity system requires an understanding that it is good and important for some elements of the system to have their hearts and heads immersed in agriculture; just as it is good and important for other parts of the system to have their hearts and heads immersed in environment. Instead of an exclusively agricultural or environmental culture, the system must achieve a culture of multi-disciplinary respect and purposeful performance orientation.

The Environmental Biosecurity Committee will need good linkages to academia, community, and to conservation land managers.

ISC response/recommendation: Retain IGAB review recommendation 11.

Recommendation 12 *Greater and explicit roles should be developed for AHA and PHA in environmental biosecurity, instituted through amended constitutions and expanded board expertise.*

We strongly oppose this recommendation because we believe it is unrealistic and unachievable. Instead we support the creation of Environment Health Australia (EHA) or a similar collaborative body tasked specifically with preparing for environmental biosecurity risks.

Specialist bodies already exist for agricultural plant diseases (Plant Health Australia), livestock diseases (Animal Health Australia) and diseases of humans and livestock transmitted by native wildlife (Wildlife Health Australia). There is no specialist body charged with developing biosecurity plans, surveillance plans and contingency plans to address environmental biosecurity risks. As a result, *this work has not been done*.

Over the past ten years there have been repeated suggestions that Plant Health Australia and Animal Health Australia could expand their operations to include the environment. Such a change was recommended by the Beale review (2008), the National Biosecurity Advisory Committee (2012) and the Senate inquiry into environmental biosecurity (2015).

However, there is no evidence that Plant Health Australia and Animal Health Australia are capable of undertaking this work in a meaningful way. Indeed, it would require revolutionary institutional changes in the way that they operate. It is unlikely that the consensus needed from industry members of Plant Health Australia and Animal Health Australia will ever be achieved to modify their company constitutions to enable the necessary environmental focus. Effective engagement and involvement of the environmental sector by the existing bodies is also highly unlikely. Expanding the responsibility of these mainly agricultural bodies would ensure that environmental biosecurity continues to be treated as an add-on to agricultural biosecurity rather than dealing with the major differences as outlined in the introduction.

Plant Health Australia itself recognised the need for a separate body in their submission to the Beale review:

“For environmental pests there are many more stakeholders across government, industry and the community than is the case with commercial specific pests. Major

challenges lie ahead in forming links and partnerships between these groups and along the continuum. Trust, goodwill and impartial decision making will be important and consideration needs to be given to establishing an independent body similar to Plant Health Australia to create the framework and coordination for partnerships to operate.” (p. 24).

Arguments by the federal government raised in opposition to creating Environment Health Australia vary but it appears the main reluctance is the cost and an in-principle opposition to creating new stand-alone bodies. The federal and state/territory governments have invested many millions of dollars in developing plans and strategies to improve industry biosecurity – more than \$20 million over the five years from mid-2008 to mid-2013.

Given how far environmental biosecurity lags behind agricultural biosecurity, there is good reason for the federal government to invest even more in an equivalent environmental body to deliver large savings in the public interest. It will also save money in the long-term due to more effective biosecurity. Bolting environmental functions onto existing industry structures is not cost effective since these bodies are unable to give environmental threats the priority and focus warranted, nor to effectively involve the community sector.

Creating a standalone body is the only practicable way to achieve the focus needed.

We urge the panel to grasp this opportunity to recommend the establishment of Environment Health Australia, complementing PHA and AHA and providing a strong platform for coordinating strengthened environmental biosecurity preparedness in Australia.

If the idea of a stand-alone body to perform the preparedness work envisioned in the proposal to establish EHA is rejected, a credible alternative needs to be proposed. Without a major change in institutional arrangements we do not believe that the important preparedness work for environmental biosecurity threats will be carried out by the Department of Agriculture and Water Resources.

ISC response/recommendation:

Replace recommendation 12 with a recommendation to establish Environment Health Australia or a similar standalone collaborative body charged with environmental biosecurity preparations.

Recommendation 13 *Jurisdictions should adopt a systematic approach to determine and plan for national priority animal, plant and environmental pests and diseases.*

This recommendation is supported by ISC with some minor wording changes to strengthen its meaning and effectiveness.

The need to undertake a systematic approach to determining national environmental pests and diseases arises from Australia's international obligations. As the CSIRO pointed out in its submission to the 2015 Senate inquiry into environmental biosecurity,

“As a signatory of the CBD [Convention on Biological Diversity], Australia has accepted the Aichi Targets of which target 9 is: ‘*By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment*’. Where there has been a process of prioritisation of species as threats to the environment in Australia, this process has only been applied by some sectors and some threat types. Moreover, no assessments have been made since 2009.”

To date, only those species that are commonly known to cause high levels of damage have been included, on a very short list of national priorities.

In the context of deciding priorities, we note that Australia's appropriate level of protection in relation to biosecurity (ALOP) was chosen to be protection that reduces “...risk to a very low level but not to zero”. This risk setting was chosen principally with trade and agriculture in mind. ISC believes that an acceptable level of risk relating to environmental biosecurity is lower still- approaching zero in fact. Notwithstanding this view of ours, even the nation's chosen ALOP (a “very low level” of risk) suggests that a short list of very highly damaging taxa will not suffice in establishing national biosecurity priorities.

In 2009 an attempt was made by ABARES (for the former environment committee of the National Biosecurity Committee) to construct a priority list of environmental biosecurity priority species. That list was not comprehensive and was not used. In determining the priorities for environmental biosecurity focus, the development of a short list of priority species is certainly not useful or effective because of the large number of species of environmental concern and the limited information available about these threats.

Therefore a ranked list of all taxa of environmental concern is a more effective and useful tool in environmental biosecurity. This must also be coupled with a strong focus on identification of priority *pathways*- a critical step in effective environmental biosecurity.

Such an approach was recommended by CSIRO in its submission to the 2015 Senate inquiry into environmental biosecurity.

CSIRO wrote:

Biological invasions with negative impacts on the environment are a diffuse threat because;

- i. there are long lists of potential invasive species with known invasion histories elsewhere,
- ii. the unique Australian context could allow many introduced species to become invasive despite no invasion history elsewhere, and
- iii. the likelihood and frequency of introduction events are generally unknown.

Therefore general and generic proactive surveillance against all potential threats is not cost-effective.

Surveillance can be cost effective for known high priority invasive alien species where an emergency response through eradication or containment is considered possible. Such well known threats still make up a long list (e.g. see Appendix 1). Environmental biosecurity surveillance may also be cost effective where it can be focused on known high risk pathways or ports of entry and risk assessment can be effectively applied to questions of pathway or port of entry risk

There is an ambiguity in the IGAB review recommendation: it is unclear if it means that all jurisdictions should adopt the one systematic approach to prioritisation, or that each jurisdiction ought to each adopt a systematic approach, which may differ. We urge that the recommendation be firmed up to propose that all jurisdictions apply one consistent systematic approach.

ISC response/recommendation: Retain recommendation 13 with minor rewording to: (a) include the identification of priority pathways; (b) clarify that all IGAB jurisdictions must apply one consistent systematic approach.

Recommendation 14 *The NBC should lead five-yearly national-level risk prioritisation for emerging animal, plant and environmental risks and pathways, in partnership with system participants, reporting to AGSOC and AGMIN.*

ISC supports national risk and pathway prioritisations, but the proposed methodology is not suitable for biosecurity threats of environmental concern.

Firstly, the idea of only using national criteria or thresholds avoids a response to threats of local, regional or state level significance. The national biosecurity system which focuses on prevention and early action is effectively our only line of defence for preventing new pests and diseases that can harm the natural environment. State governments, other 'relevant industries' and local communities are unable to put in place pre-border, border and post border controls to stop these species and so are reliant on collaborative national biosecurity defences to prevent and rapidly address biosecurity threats at their geographic level.

It is suggested when 'conducting preliminary assessment' (page 41) that one criterion is that there is 'a clear benefit from national effort and/or response'. As there is no agreed method of determining environmental costs or benefits relating to biosecurity, environmentally invasive species must be assessed on the basis of expert environmental/ecological opinion, for example through the expert-based strategic foresighting exercise proposed below.

As suggested in our comments on recommendation 13, environmental biosecurity risks are characterised by poor knowledge, a high degree of uncertainty and potentially large and permanent impacts, and so a greater emphasis on priority pathways is essential. Identified priority pests could serve as indicator species to gauge the success of efforts to reduce risks from pathways and to guide surveillance activity. On its own, a priority list of species of national environmental concern should not be the sole target for biosecurity efforts.

Therefore, 'figure 4 Determining national plant, animal and environmental pests and diseases' should be modified. The first three steps of the diagram under the heading 'Profiling priorities' would begin with conducting an evidence-based synthesis of existing published material to develop a prioritised list of risks and pathways, followed by a strategic foresighting exercise to identify and prioritise future and unknown risks and pathways. The results of these two processes would then be integrated to form a combined priority list of environmental biosecurity risks and pathways.

The first step in the 'Pest and disease activity planning' described in Figure 4 would be 'risk management measures' rather than 'risk assessment'.

This type of process will be followed in the environmental biosecurity risks and pathways project that the Invasive Species Council is conducting with Monash University from 2017-2018 for invertebrates. ISC can provide more information about this on request.

For environmental biosecurity risk and pathways, a ranked list of national biosecurity priorities is superior to a shorter list of just a few known priorities. All species should undergo formal, science-based, transparent (and where a risk to the environment is concerned, precautionary) risk assessment.

The outcomes of these risk assessments should be published, and inform the development of a national ranked priority list. All invasive species with the potential to harm the

environment could be considered priorities, with strategic planning and investment by jurisdictions stretching as far down the list as possible at any given time.

Recommendation 14 says that risk prioritisation will be developed “in partnership with system participants”. However, the three stage process described for setting national priorities suggests that the first time the public will get to know of the prioritisation process is when the final approved list of priority species is published. This must be changed. The process must involve publication of preliminary assessments and the ability for the public to nominate species for priority assessment.

This is especially important as the recommendation suggests “reporting to AGSOC and AGMIN”. These two bodies are extremely opaque, issuing only general communiqués, and otherwise conducting their work essentially in secret.

If the problems with transparency of the biosecurity system are to be overcome we urge the panel to take every opportunity to recommend measures to shine light on priority setting, risk and pathway assessment and decision making, for example by recommending publication of preliminary assessments as suggested above.

The draft review report proposes that the national priority list is to be reviewed no less than every five years. Preparation of the first list and the development of updates will take some time. We suggest that assessments are developed on an on-going basis with a maximum time period before a full periodic review is completed of five years.

It would be helpful if the final review report’s text made a clear distinction between risk assessment and priority-setting. One is an evidence based process, the other a matter of judgment based on that evidence-based process but overlaying judgments about the assets at risk, the resources available etcetera.

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) is currently leading the development of a priority list of weeds and ‘potential invasive species with predominantly environmental impacts’ (page 41, IGAB review). With their predominant agricultural focus, ABARES is unsuitable for conducting environment risk assessment due to their limited ecological expertise and poorly collaborative culture. Past projects of this type undertaken by ABARES have involved minimal consultation and collaboration and have not demonstrated a sound understanding of ecological perspectives.

ISC response/recommendation: Maintain recommendation 14, but modify the first part of Figure 4 that describes the process for determining environmental pests and diseases so that the knowledge synthesis and strategic foresight steps used to determine environmental risks and pathways is included.

Recommendation 15 *The sectoral committees of the NBC, with the endorsement of the NBC, should develop an agreed set of National Biosecurity R&I Priorities, in consultation with system participants and in line with the agreed national priority pests and diseases. Priorities at a sectoral and cross-sectoral level need to be considered. The priorities should be developed within two years of the final IGAB review report, and should be reviewed every five years*

ISC supports this recommendation with the inclusion of specific measures to ensure its effectiveness in practice for environmental biosecurity, and to include pro-active extension and community engagement priorities.

The National Environment and Community Biosecurity Research Development and Extension Strategy was adopted last year, but lacks a coordinating body or a budget. Without these, substantial progress is unlikely. A logical coordinator is either the proposed Environment Health Australia or the proposed new national biosecurity research institute (see our further ideas on this below). Similar animal health and plant health RD&E strategies are coordinated respectively by Animal Health Australia and Plant Health Australia and have a full time staff coordinator.

Environmental biosecurity lacks a comprehensive priority list of risks and pathways. It will take some time to prepare these priority lists for different taxa. Once priority lists are prepared, the RD&E strategy should be refined to take into account this new information.

We note and welcome the inclusion of extension in the recently published strategy, and we draw the attention of the panel particularly to p. 23 (citizen science) and p. 39 (harnessing the community). We urge that IGAB review recommendation 15 be expanded to include not only research and innovation priorities, but also extension and community engagement priorities. This inclusion will provide jurisdictions the opportunity to develop new and expanded ways of bringing the community closer to Australia's biosecurity system, consistent with the panel's theme of emphasising better community engagement.

Work under the RD&E strategy relies on disparate research bodies such as universities, museums and botanical gardens, and some state and federal government science programs. There is a strong case for a biosecurity research institute to coordinate research effort across Australia. This can include environmental biosecurity provided it is structured with strong environmental representation. It would address serious gaps in coordinated efforts in weeds, diseases and pests of native plants and marine biosecurity.

At present the newly established Centre for Invasive Species Solutions (transitioning from the Invasive Animals CRC, which winds up in June 2017) does not have a strong environmental and biosecurity focus, while the Plant Biosecurity CRC, due to end in mid 2018, has had a limited focus on pests and diseases of native plants. The Plant Biosecurity

CRC proposal for Smart Biosecurity: Australasian Plant Biosecurity Collaborative Science Institute is supported by ISC provided the governance structures include environmental interests and purposes and there is an appropriate funding stream to support environmentally focused research.

ISC is of the view that the research and development corporation model (Option 2 in the relevant feedback question from the draft report) is unsuitable for environmental biosecurity research, and would further delay national coordination of environmental biosecurity research and development.

An ideal way of advancing environmental biosecurity research would be to establish a national research centre for environmentally invasive species, focussed on the cost-effective prevention end of the invasion curve, and on management of invasive species that have environmental impacts. However, option 1 – establishing a new stand-alone entity for cross-sectoral biosecurity R&I – could also work provided the governance structures include environmental interests and purposes and there is an appropriate funding stream to support environmentally focused research. It should be a permanent entity as biosecurity R&I will always be an important priority for this country.

ISC response/recommendation:

Recommend the establishment a new stand-alone, permanent entity for cross-sectoral biosecurity R&I with governance structures that include environmental interests and purposes, and with an appropriate funding stream to support environmentally focused research.

Recommend that the panel recommends implementation of the National Environment and Community Biosecurity Research, Development and Extension Strategy be fully funded and provided with a delegated coordinating body (ideally either Environment Health Australia or the new R&I body above) and dedicated budget, and that it be regularly reviewed and revised through sectoral and community consultation.

Recommend that development of extension and community engagement priorities be recommended in the final review report alongside development of research and innovation priorities.

Recommendation 17 ***First Ministers should, within IGAB2, identify lead ministers and agencies for biosecurity (assumed to be agriculture or primary industries) and require supporting whole-of-government arrangements to be in place, including through memoranda of understanding.***

We support this recommendation but suggest that it be strengthened by replacing the text in parentheses with this: “(which may be environment, agriculture, primary industries or similar agencies)”. It is time that the assumption that biosecurity is necessarily operated out

of agriculture departments was set aside. We have previously recommended that at the state level the ideal would be a joint agency/unit combining environmental and agricultural expertise. In Queensland for example, biosecurity used to be under the Department of Natural Resources, which was independent of both environmental and agricultural agencies.

We challenge the statement in the text that “Given the experience and knowledge accumulated, agriculture would be the logical lead discipline” (pp.60-61). One could equally argue that as environmental biosecurity is less well developed, environment agencies would be just as logical a choice in order that they be enabled and resourced to build the necessary system capacity. At times programs and goals within agricultural agencies directly conflict with environmental biosecurity, such as the development and promotion of weedy pasture grasses. But the principle issue is that the expertise and the mindset required to deliver environmental biosecurity, a major part of the overall biosecurity system, is more likely to reside in an environmental agency (or one that is independent of agriculture and environment).

ISC response/recommendation: Maintain this recommendation, but remove the assumption that agricultural agencies will take the lead.

Recommendation 20 *The NBC should adopt a sub-committee structure that aligns with the revised national biosecurity system objectives and national reform priorities in the IGAB. All NBC working groups and expert groups should be task-specific and, wherever possible, time-limited.*

We support this recommendation strongly. There is a need for increased environmental capacity within NBC itself as well as those sub-committees, working groups and expert groups that include environmental biosecurity within its work.

ISC recommendation: ISC supports this recommendation

Recommendation 21 *The NBC should take steps to increase its public profile and openness, including establishing a stand-alone website. The website could be maintained by, but be separate from, the Australian Government Department of Agriculture and Water Resources, and could accommodate and centralise all information on the NBC, its committees, and their activities. Key policy frameworks, agreements and reports of the NBC should be made publicly available on the site.*

We strongly support this wise recommendation.

ISC has long been urging improved transparency throughout the biosecurity system. Increased public openness should become common to all elements of the biosecurity

system, from R&I organisations, to decision-making authorities, committees and sub-committees. The default position should be full and early public disclosure and engagement. Only when a compelling reason exists should information be withheld from public view or its release delayed.

In a recent case-in-point ISC made a freedom of information request for the minutes and papers of the National Biosecurity Committee over a three-year period, in order to try to understand the deliberations and decision-making around aspects of recent biosecurity decisions in the federal arena. The initial response to our FOI request was refused as it “would involve a substantial and unreasonable diversion of resources of the agency from its other operations due to [the request’s] broad scope”. A narrowed request that covers a one-year period with some exclusions would cost over \$1,000 still with no guarantee at all that the request for information would ultimately be granted. We have yet to decide whether we are able to afford to pursue access to the information, whose publication should really be a matter of course in a modern transparent system.

At the same time we made a freedom of information request for minutes and papers of AGMIN meetings from 2014 to September 2016. This request was also refused as a “substantial and unreasonable diversion of resources”. When the request was narrowed to only those matters relating to environmental biosecurity or invasive species with an environmental impact, a cost estimate of \$496 was received, with no guarantee that the information would be provided. Prior to the start of 2014 and the formation of AGMIN, all minutes and papers of AGMIN’s predecessor, the COAG Standing Committee of Primary Industries, were publicly available on the internet at no cost.

It is unfortunate that the basic workings of the biosecurity system should be so difficult to penetrate from a public interest point of view. So we not only support this recommendation but urge that transparency provisions be clearly spelled out in the IGAB agreement itself.

All information about biosecurity decision-making, programs, projects, risk assessments, research, path-way analyses, interventions, listings and declarations, including the processes and reasons behind assessments and decisions, should be published on the internet unless there are compelling reasons that this not occur in particular instances. Information published must enable the public and stakeholders to understand and evaluate biosecurity decisions and performance

Our comments here apply similarly to biosecurity-related deliberations of AGSOC and AGMIN. Within the context of allowing senior officials and ministers to consider issues *in camera* when necessary, their agendas and outcomes should be much more open than is currently the case.

ISC response/recommendation: ISC supports this recommendation

Recommendation 22 *AGSOC should establish and provide oversight to an independent IGAB Evaluation Program to assess and report on implementation of each jurisdictions' commitments under the IGAB. The evaluations, or a summary of them, should be made publicly available following ministerial consideration.*

We support this recommendation. Independent evaluation is important to give jurisdictions and the public confidence that the considerable effort and expenditure under the agreement is making headway towards the goals of the agreement. We urge that the final report recommend that the evaluations be made publicly available in full, not just summary form.

ISC response/recommendation: Retain this recommendation, but recommend that evaluations be made publicly available in full.

Recommendation 24 *The NBC should report annually to AGMIN on its progress of priority reform areas. The NBC's work program and annual report should be made publicly available upon ministerial consideration.*

It is normal corporate and government practice today to produce an informative annual report about an organisation's people, their activities, outcomes, finances, and environmental (or corporate social responsibility) performance. The NBC should certainly publish such reports. Such NBC annual reports should be considered as reports to the NBC's public "shareholders" represented by the AGMIN ministers. In that spirit the annual report should be made publicly available with no caveat on that publication. The biosecurity system must move into the modern world of public accountability.

ISC response/recommendation: Maintain this recommendation.

Recommendation 25 *AGSOC should establish, as a priority, an Industry and Community Advisory Committee to provide advice to the NBC on key policies and reforms.*

We strongly support this good recommendation.

At present there is no formal structure to provide input to NBC from environmental and community stakeholders.

We urge the panel to recommend that an equal balance of industry and community/environmental membership must be present on the committee, to avoid community members' voices being lost among a majority of industry voices. Ideally the types of skills and experience the committee members should hold (for example "skills and/or experience in private natural area management in relation to invasive species", and/or "Skills and experience in ecological science relating to biosecurity" and/or "skills and experience in development of codes of practice and guidelines for biosecurity") would also be recommended or referred to in the text of the final report. This would help avoid a situation where peak bodies nominated committee members whose interests were sectoral rather than spanning both sectoral interests and thematic interests in biosecurity itself.

ISC response/recommendation: Maintain this recommendation, also recommending an equal balance of community and industry members be appointed to the committee.

Recommendation 26 *The NBC should convene a dedicated annual national Biosecurity Roundtable for AHA and PHA members to provide direct input to the NBC.*

This seems a reasonable step to increase direct communication between industry and the NBC. We note that the membership of PHA and AHA reflects the agricultural and industry focus of the two organisations under their constitutions.

Such an annual arrangement should also be provided for environmental and community stakeholders to provide direct input to the NBC.

ISC response/recommendation: Maintain this recommendation, and add a recommendation or reference to the need for a similar annual arrangement for community and environmental interests to provide direct input to NBC.

Recommendation 27 *The NBC and the Industry and Community Advisory Committee, in consultation with other key stakeholders, should revise the National Framework for Cost Sharing Biosecurity Activities to enable its practical application.*

We do not oppose this recommendation. We urge that to the extent that industry representatives have influence over cost-sharing arrangements through the industry and community advisory committee's role in proposed review, careful consideration be given to declaration of conflicts of interest. It is less likely, for example, that industry representatives

would recommend government biosecurity levies on their own sector, than that people not tied to the sector would do so.

ISC response/recommendation: Maintain this recommendation, and refer in associated text to the importance of declaring and managing conflicts of interest.

Recommendation 29 *The IGAB should include an ongoing commitment to the funding stocktake, with governments publicly reporting their expenditure and the high-level stocktake results under uniform and fully inclusive categories.*

We strongly support this recommendation, in particular the recommendation to ensure that the stocktakes are reported publicly. This step will help to ensure improved transparency of the biosecurity system in Australia.

ISC response/recommendation: ISC supports this recommendation.

Recommendation 30 *All governments should review their current biosecurity expenditure, with a view to redirecting funding into areas that return the highest yields to farmers, industry and the community. This approach will require a planned and coordinated strategy of engagement and communication.*

The extreme severity of invasive species impacts on the natural environment to date and the reliance on public funding for environmental protection requires that much more funding be directed to environmental biosecurity than has been the case.

This will mean ensuring an adequate proportion of funding is invested in prevention of new invasions and incursions (as suggested by the generalised invasion curve shown in the draft report). It will also require an increased focus on rapid action to eradicate and/or contain biosecurity threats (especially environmental ones) that evade preventative efforts.

Sufficient public biosecurity funding must be allocated to support the system's ability to address the protracted neglect of environmental biosecurity described in the panel's report.

Budgeting for environmental biosecurity and invasive species management should be based on transparent assessment of the resources required to meet declared policy objectives. Any gap between funding available and funding needed to achieve policy objectives should be clearly described in annual state of biosecurity (or similar) reports.

It is important to note that there is no agreed method of measuring the costs and benefits to the natural environment of biosecurity interventions. The benefits accrue to the environment itself in its diversity, resilience and innate existence value, as well as to humans. One cannot make environmental protection investment decisions based on returns to the community, industry or farmers, for example. These decisions must be based on the risk profile of the species at issue and the natural environmental values of the ecological “assets” at risk. Formal, evidence-based, precautionary risk assessments coupled with transparent expert input is the best way to achieve this.

ISC response/recommendation: Maintain this recommendation on condition that broadened wording is used along the following lines: “...highest yields public good outcomes to farmers, industry, ~~and~~ the community and the environment”.

Recommendation 34 *State and territory governments should review their biosecurity cost-recovery arrangements to ensure they are consistent, appropriate and transparent.*

ISC supports this recommendation.

Although NGOs, other groups and individuals contribute substantially to environmental biosecurity, and “polluter pays” and “beneficiary pays” principles can be applied to some extent, the majority of funding must come from the public purse, as environmental outcomes are “public goods”.

It is critically important that preventative actions and rapid responses to environmental incursions not be denied or delayed merely because of doubts about funding responsibility, or because of cost-sharing disputes.

ISC response/recommendation: ISC supports this recommendation.

Recommendation 35 *All levels of government could help meet their budgetary challenges by reviewing biosecurity levies and rates/charges currently or potentially applying to system participants. These should be commensurate with agreed national cost sharing principles, which the Review Panel considers should be reviewed.*

See our response to recommendation 34, above.

Recommendation 36 *The NBC should establish a time-limited task group to progress development of a performance framework and performance measures for the national biosecurity system.*

This is an excellent recommendation. It is critically important that the task group has experts in measuring performance regarding biodiversity conservation and conservation land management. Expertise in measuring the health of the terrestrial, freshwater and marine natural environment will be crucial. While performance in things like community engagement, transparency, governance and output delivery is important, actual biodiversity conservation outcomes are the ultimate measure of the system's performance (albeit surrogate measures may be needed in the short to medium term, as environmental outcomes will be unlikely to come about in the short to medium term).

ISC response/recommendation: ISC supports this recommendation.

Recommendation 37 *The Australian Government should facilitate development of an integrated, national biosecurity information system to provide a common platform for all jurisdictions to share and access biosecurity data and information in the national interest.*

We strongly support this recommendation.

We urge that it be strengthened by recommending that the design and institution of the information system be completed within two years, under adequate Commonwealth initiative funding. We understand that creation of such systems is complex, and entails many barriers that must be overcome (for example commercial-in-confidence issues, privacy issues, issues around avoiding reputational damage and discouragement of reporting).

With sufficient rationale, political will and resourcing, these barriers are surmountable. The egregious harm being done to Australia's natural environment through long-term failures in environmental biosecurity warrants a very strong act of leadership in mandating that such an information system be created.

ISC response/recommendation: Maintain this recommendation and strengthen it by recommending that the design and institution of the information system be completed within two years, under adequate Commonwealth initiative funding.

Recommendation 38 *Data and knowledge sharing should be a core commitment of jurisdictions under the IGAB. Minimum standards and specifications should be agreed for data sets.*

See our response to recommendation 37, above.

A strong information system will include:

- A public, national priority list of invasive species not yet established in Australia that are of environmental biosecurity concern, and of priority pathways for environmentally invasive species
- A national priority list of invasive species already established in Australia ranked by degree of environmental invasiveness, and annotated with species' regulatory status by jurisdiction
- Nationally agreed protocols for collection and supply of data on interceptions and incursions, and a national publicly accessible database on interceptions, incursions and responses.
- A national geospatial data portal for invasive species distribution and abundance relative to environmental and biodiversity assets
- A national database of seized exotic wildlife
- A national database of risk assessments of environmentally invasive species

ISC response/recommendation: ISC supports this recommendation.

Recommendation 39 *The Australian Government should establish, within the Department of Agriculture and Water Resources, a dedicated National Biosecurity Intelligence Unit, to coordinate and provide advice to the NBC, AGSOC and AGMIN on biosecurity intelligence covering emerging risks and pathways, and international and domestic pest and disease detection.*

This is an excellent recommendation. We note the utility of community engagement in generating not only surveillance effort, but intelligence about biosecurity issues. We urge that the panel make reference to community engagement in relation to this recommendation. A strong and properly funded community engagement program must be an on-going part of the country's biosecurity system.

Liaison between the intelligence unit and the Office of the Gene Technology Regulator will assist in detecting the activities of biohackers who may use genetic manipulation and synthetic biology techniques in informal and unlicensed research settings to create new GM organisms of biosecurity concern.

We raise a question as to whether a biosecurity intelligence unit might be better located in independent premises rather than in the agriculture department, in order to ensure the unit's ability to operate with adequate confidentiality and independence.

ISC response/recommendation: Maintain this recommendation, inserting “and OGTR” after “AGMIN”, and giving consideration to the question of whether the intelligence unit would be better housed in an independent location rather than in DAWR. .

Recommendation 40 *Jurisdictions should adopt the proposed new priority reform areas and associated work program for IGAB2, and amend the IGAB in line with proposed revisions.*

We agree with this recommendation, but urge that the priorities outlined on pages ix-x be strengthened.

For example, the simplified goal should include the words “biodiversity and ecology”, so as to ensure that the ambiguous word “environment” not be given mere lip-service in the system's operation (as has occurred previously), and; Part 7 should read ... *recognising that the rate of progress will be contingent on available resources and so committing to increase the resourcing of the biosecurity system to adequate levels*”.

We strongly support:

- the proposed section in IGAB on “core commitments”.
- The formalisation of the NBC and its terms of reference
- Establishment of a program of evaluations
- The identification of lead and supporting agencies
- Inclusion of reference to Australia's commitment to the CBD

We take issue with the proposed change to 3.2iii in that it focuses only on nationally significant invasive species. All species of high or very high risk assessment should be addressed, and not only “where appropriate”, but in order to “minimise their impact on environmental values”.

ISC response/recommendation: Maintain this recommendation, and strengthen the priority reform areas to give greater prominence to environmental biosecurity.

Response to the review panel's feedback requests

Feedback request 1 *The Review Panel seeks feedback on the draft roles and responsibilities of national biosecurity system participants.*

We refer you to our earlier submission to the panel, in which we put forward several ideas on institutional reform. Principal amongst these is the creation of Environment Health Australia.

Feedback request 2 *The Review Panel seeks feedback on the total effort and costs associated with demonstrating area freedom by jurisdictions, and the value of that trade.*

Our view is that if it is in industry's interest to demonstrate area freedom, industry may fund that demonstration. Public monies should not be diverted to this end, unless associated with eradication effort in the public interest.

Feedback request 3 *The Review Panel seeks feedback on the following options for a new entity for cross-sectoral biosecurity R&I:*

Option 1: Establishing a new stand-alone entity for cross-sectoral biosecurity R&I.

Option 2: Addressing cross-sectoral biosecurity R&I within an existing RDC (for example, the Rural Industries RDC).

The Panel also seeks feedback on the funding options and would welcome alternative suggestions.

See our response to recommendation 15, above. Our ideal outcome would be the establishment of a new national research centre for environmentally invasive species established to fill the relatively large research and innovation gaps in environmental biosecurity as compared to agricultural biosecurity.

Of the two options relating to this feedback question, we hold that Option 2 cannot work. RIRDC's deep expertise and dedication to rural industries research and development would not, in our opinion, be readily re-configurable to encompass a more cross-sectoral role (incorporating environmental considerations).

Option 1 on the other hand could work so long as it is established as a *permanent* entity. Option 1 provides a fresher start for R&I with the opportunity to incorporate a more concerted focus on environmental biosecurity.

Feedback request 4 *The Review Panel seeks feedback on the proposed Terms of Reference for the NBC.*

The establishment of an environmental biosecurity sub-committee should be written into the terms of reference. A further term of reference should be included to “provide advice on means of reducing the impact of invasive species on Australia’s natural environment to a minimum”.

Feedback request 5 *The Review Panel seeks feedback on the following options to ensure a more rapid-response to an exotic pest or disease incursion:*

Option 1: Cost-sharing arrangements should provide for four weeks of monitoring, assessment and preliminary control strategies, while an overall assessment is conducted on the possibility of successful eradication.

Option 2: Cost-sharing arrangements should include a default funding arrangement for when decisions cannot be quickly reached about the success or otherwise of an eradication program.

We believe that both options can be adopted concurrently as necessary. This would ensure that monitoring, assessment and preliminary control strategies are rapidly set in place in the short term, and that (especially for species assessed as posing a high or extreme risk) early eradication action can also commence on the ground or in the water, concurrent with the assessment of the likelihood of eradication.

Conclusion

The draft report correctly identifies several areas that can be strengthened to significantly improve Australia’s biosecurity system. We applaud the panel for the good work to date in the review process. We urge that the opportunities outlined in this submission to further strengthen the review’s recommendations be grasped in the panel’s final report.

For example we urge the panel to make recommendations that create new institutional arrangements to focus on environmental biosecurity, improve transparency and community stakeholder engagement, assign responsibility for preparedness and establish a new permanent cross-sectoral biosecurity R&I body that includes a focus on environmental biosecurity.

This review and its recommendations present a very significant opportunity to address biosecurity threats to Australia's native plants, animals, natural areas and way of life. We welcome the dialogue that we have had with the panel and the opportunity to comment on the draft report.

We look forward to the final report's publication and wish the panel well in their deliberations.