



THE UNIVERSITY OF
SYDNEY

Dr Michael Spence
Vice-Chancellor and Principal

7 July 2016

Dr Wendy Craik AM
Chair
Intergovernmental Agreement on Biosecurity Review
C/- igabreview@agriculture.gov.au

Dear Dr Craik

Please find attached a brief submission from the University of Sydney in response to the *Intergovernmental Agreement on Biosecurity Review's* important discussion paper released in May 2016.

Globally, diseases arising from biological pathogens are a major cause of food insecurity, social disruption, economic instability, illness and morbidity in animals and humans. The social, environmental, policy, legal and scientific issues involved are complex and ensuring policy makers have access expertise is critical if we are to minimise the risks of future outbreaks.

The University of Sydney has longstanding strengths in biosecurity research and education across the human, animal, plant, soil and water domains. Our submission has been prepared with input from experts drawn from various faculties and research centres with programs dedicated to minimising future biosecurity risks.

For example, through the [Marie Bashir Institute for Infectious Diseases and Biosecurity](#) we are seeking to lead cross-disciplinary approaches to researching emerging and re-emerging infectious diseases in humans and animals, with a particular focus on assisting the development of policies and strategies to prevent, contain and control biological diseases.

Our [Plant Breeding Institute](#) within our Faculty of Agriculture and Environment has substantial expertise in plant biosecurity, especially in relation to rust diseases, where it has been the national authority and reference centre in cereal rust surveillance since 1921.

Our [Faculty of Veterinary Science](#) is recognised internationally for its strengths in farm animal and veterinary public health; microbiology and epidemiology; molecular and diagnostic parasitology; and pathobiology. Staff in our [Centre for International Security Studies](#) and other faculties and schools have expertise in emerging and ongoing policy and legal challenges associated with disease-related events, biological weapons, and international strategies and agreements.

We would be more than happy to facilitate meetings between members of the Review Panel and our staff with expertise in particular areas of interest to the Review.

Yours sincerely,

(Signature removed for electronic distribution)

Professor Stephen Garton
Acting Vice-Chancellor and Principal

Attachment University of Sydney submission to the IGAB Independent Review



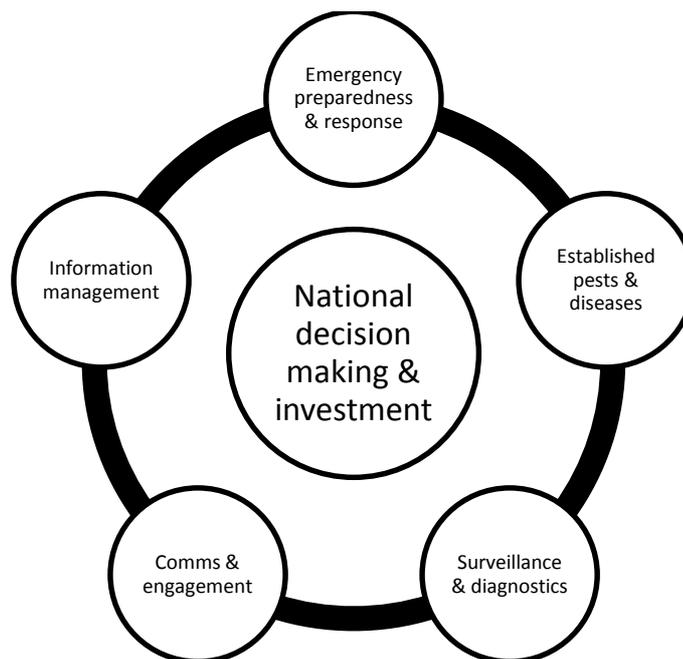
University of Sydney submission to the IGAB Independent Review Panel Discussion Paper: *Is Australia's national biosecurity system and the underpinning Intergovernmental Agreement on Biosecurity fit for the future?* July 2016

Thank you for the opportunity to comment on the [Intergovernmental Agreement on Biosecurity \(IGAB\) Independent Review Panel Discussion Paper](#) released in May 2016. Rather than responding to the individual questions posed in the paper, the University would like to make the following broad comments in four key areas.

Objectives, priorities and governance

For the six consolidated 2012 IGAB priority areas, we question the separate listing of Priority 1 '*National decision making and investment*', and recommend that this overarching priority is presented (and pursued) as under-pinning the approach that will be taken for all priority areas as indicated in the diagram below.

We would also question the absence of a '*Research and Education*' priority on the list, particularly noting the emphasis the Discussion Paper gives (pp25-26) to the important role that research must play in underpinning the future strength of the national biosecurity system.



Objective 1 of the national biosecurity system (p17) is by far the most important component and the economic returns of this are amply demonstrated by Figure 3 (p21). The Discussion Paper notes that prevention is preferred but the strategy needs to ensure that the approach to prevention extends well beyond border protection. There is no mention at all regarding prevention within the source country, for example through the strategic use of international aid, research and educational partnerships to strengthen the ability of the source country to detect and manage disease outbreaks so there is a minimal risk of export.



Figure 2 (p15) appears overly burdensome with too many groups and committees. For example, what are the benefits of separating emergency preparedness from information governance; or the Animal Health and Plant Health committees from the Invasive Plants & Animals Committee?

The focus of biosecurity

Within the International Governmental agreement on Biosecurity (IGAB) there is an understandable emphasis on biosecurity as a facilitator of trade. Maintaining Australia's freedom from serious disease and pests contributes substantially to our access to overseas markets.

However, it is important to note that there are other important drivers of biosecurity, namely the control of endemic diseases to improve animal, human and environmental health. Based on constitutional mandate and various inter-government agreements, State governments have been responsible for the control of endemic diseases. Nevertheless, substantial reductions in State government services and funding now jeopardise our national system of biosecurity. For example, our experts dispute the claim that Australia enjoys a '*robust diagnostic systems and capacity*' (p24) compared to international benchmarks. The national veterinary diagnostic system has been degraded as a result of State government funding cuts, and currently no full service veterinary diagnostic laboratory exists between Brisbane and Darwin.

We suggest that the panel work to address the issue raised here of balancing the needs of biosecurity in the 21st Century, with a focus on outcomes rather than process.

Stakeholder engagement

The discussion paper stresses the need for stakeholder engagement, and rightly states that "*concerns have been raised over the level of engagement with industry...*" (p16). We believe that government approaches to stakeholder engagement on biosecurity require a major shift, whereby governments engage with and listen to stakeholders and incorporate this information when developing priorities. Without this engagement, biosecurity will continue to be seen as essentially a government-only responsibility.

One reason that such engagement has failed in the past may be that governments tend to use a framework of prioritization based on an economic model that excludes other interests and priorities in the development of policy. The use of this kind of model, without questioning its underlying assumptions, risks alienating stakeholders with other concerns, who may subsequently feel that they do not have a real say in biosecurity policy in this country. Figure 3 (p21) is an example of a financial-driven decision-making process.

Stakeholder engagement is essential for cross-sector agreement and action on internal biosecurity programs and responses. A stronger local, internal biosecurity system which addresses the spread of diseases within Australia has not only a benefit for production and health, but it is actually the most important component of providing confidence to overseas markets. Programs such as the National Arbovirus Monitoring Program (NAMP) are needed, but a strong generic biosecurity system is of more value to Australia.

There are some examples of community engagement in biosecurity. One is the Livestock Biosecurity Network (LBN), an industry-based initiative. However, the LBN does not appear in this discussion paper. Examining some of the successful examples of community engagement in biosecurity might provide insight into how to increase community engagement.



A case in point where further stakeholder engagement may have provided deeper insight and better results is the agreement on the Appropriate Level of Protection (ALOPs). There are 40 priority areas (p10) in the current IGAB, and we question what role stakeholders have played in developing these priorities. Activities and investment based on cost-effectiveness disregard community values such as health, safety, sustainability and environmental protection.

The need for engagement is recognised (p12), but no strategy is advanced. One relatively easy and fast way to implement such engagement is an overhaul of disease prioritization methods, to make these more holistic and less focused on economic arguments.

It is true that the ordering of risks and priorities is essential to achieving maximum return on investment. Up to now this has essentially been a government task. However, we would argue that this an area in which stakeholder engagement cannot be neglected, as the maximum return for the Australian community will not always be defined in economic terms.

In Figure 2 (Arrangements supporting the IGAB) (p15), Animal Health Australia (AHA) and Plant Health Australia (PHA) are shown as the filters for consultation with the animal and plant industries. We question whether this is appropriate. Despite their best efforts, these organisations cannot adequately represent all views. For example, veterinary schools are also stakeholders. They are associate members of AHA, but in our experience their priorities are not reflected in AHA activities.

Increased community engagement would assist the adoption of shared responsibility. This is particularly relevant when defining the 'public good'; this cannot be based solely on the economic assumptions favoured by government.

Research

Investment in research and capacity building underpins biosecurity. In our view, Australia does not have a well-planned and sustainable approach to funding biosecurity research and capacity building. Research funding for animal biosecurity has been complex and haphazard since the demise of the Animal Biosecurity CRC over 5 years ago.

As a result of this lack of coherency, those involved in research in this area must rely on *ad hoc* Commonwealth and State government funding, industry funding or the Australian Research Councils linkage and discovery programs. In all these areas biosecurity often is not competitive. In government funding there are often higher priorities, and in industry and ARC funding there is often the view that biosecurity research should be funded by government.

There is also an increasing trend for research funded by industry levy funds to be producer-driven. Producers do not always appreciate the value of biosecurity when it goes head-to-head with short-term priorities such as nutrition and production. Another issue is the fear of market reaction if biosecurity surveillance identifies adverse outcomes. Therefore biosecurity funding falls through the gaps. A long-term funding strategy is desperately needed.

A model that could be evaluated is the US Department of Agriculture (USDA). The USDA has an ongoing funding program for competitive, peer-reviewed research. No such comparable system exists in Australia. As an example, the USDA has funded wheat rust biosecurity at a national centre of excellence in St Paul Minneapolis since the 1920s. In Australia, a large proportion of the cost of a similar program has been shared by the Australian grains industry, NSW DPI, and the University of Sydney. US State governments are also more committed to funding animal health and agricultural research via university research than is the case in Australia. In many US veterinary schools there are joint appointment between university and state positions, often focused on diagnostic laboratory or extension services.



Another issue that needs to be considered in biosecurity research is data ownership. This issue can cause concern when data is generated by industry-funded research, particularly if the findings can have market impacts. Overall, the more data that can be generated by publicly-funded research, the more data can be made available for further research that is in the interest of the Australian community. We also suggest that the IGAB Review Panel examine the National Animal Biosecurity Research, Development and Extension Strategy to strengthen links between the two.

Finally, a national architecture of biosecurity that takes into account the dispersal potential of pathogens does not exist. Some pathogens and pests have limited dispersal potential, and can be managed at the local or even state level. Others spread rapidly on the wind across large areas that span state borders. For example, continuous national cereal rust monitoring at the University of Sydney's rust laboratory since 1921 has shown time and again that exotic rust incursions and new, locally derived strains of rust, spread rapidly over large distances. An exotic strain of leaf rust detected first in SA in August 2014, was present in all Australian wheat growing regions within 12 months. The most cost effective and efficient way to manage the risk of pathogens such as the rusts is via a centralised, nationally coordinated surveillance system that is not impeded by state biosecurity laws.

National leadership is required to take stock of the current strengths and weaknesses of Australia's human, animal and plant biosecurity research, and to develop and implement a national strategy to build and sustain a well-coordinated biosecurity research and education capacity.

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