CSIRO Submission on the Consultation Draft of the National Biosecurity Strategy

18 March 2022

Introduction

A CSIRO representative sits on the National Biosecurity Strategy Reference Group through which significant feedback has already been provided during the consultation drafting. This submission, therefore, reflects broader views and issues including provided by CSIRO Health and Biosecurity Business Unit and the Australian Centre for Disease Preparedness. CSIRO also supports the points raised in the separate submission from the CSIRO led Atlas of Living Australia focussing primarily on national research infrastructure, long-term challenges around taxonomic capability, data sources, standards, interoperability and analysis, and the role of citizen science and the community in the National Biosecurity System.

General Response

The Consultation Draft is a well written concise document describing and supporting National Biosecurity Strategy development. Generally, gaps and weaknesses are in the following areas:

- The Consultation Draft seems to consider the National Biosecurity System rather in isolation, not recognising that as a National Strategy is needs to be set in the context of other relevant biological threats to national security i.e. strategy documents under development aimed at improving national prevention and preparedness to future global pandemics and zoonotic disease threats, the National AMR strategy and other national security preparedness activities.
- The Consultation Draft does not go into any detail on the research and development needs of the National Biosecurity System simply stating there is a need to apply new technologies particularly around digital solutions. While there is mention of the need for priorities, there is no reference to the three National Biosecurity RD&E Strategies (Plant, Animal and Environment & Community) which have been adopted by DAWE and the National Biosecurity Committee and acted upon over the last 10 years.
- The Consultation Draft does not explicitly identify or define where the known weaknesses exist in the Biosecurity system as documented by a number of independent government review panels and reports of the Inspector-General of Biosecurity. It is therefore hard to see clearly whether this strategy recognises where gaps and weakness need to be addressed. This largely

prevents understanding of whether the Consultation Draft is proposing Actions to address weaknesses or simple proposing continuations down historical pathways.

- The Actions are generally not very ambitious particularly from an investment models and tech-transformation need context. Indeed, the Commonwealth Biosecurity 2030 roadmap captures this much more actively. It is also not clear what the process was to define the listed Actions and the degree to which this was through a definable engagement process with stakeholders or simply added by the team writing the Consultation Draft as examples.

1. Scope of the Strategy

Do the proposed vision and purpose reflect what we want to achieve and how we want to evolve our system into the future? – Are our 6 priority areas where we should focus our efforts in the future? Is anything missing?

The six priority areas are all justified but biosecurity prevention is poorly covered in the priority areas of the Consultation Draft except diagrammatically on page 16. Preparedness is widely discussed but a National Biosecurity Strategy also needs to strong focus on prevention through offshore surveillance and intelligence gathering and biosecurity risk pathway analysis.

The Consultation Draft does not address or explore the synergies with National pandemic preparedness and the National AMR strategy. The combined needs of the three systems are complementary particularly for surveillance, therapeutics and diagnostics. In surveillance there are similar strategic challenges in data collection, interoperability, and analysis. Effective national strategy requires an integrated approach across health and biosecurity, which can only happen if there is acknowledgement that AMR, biosecurity and pandemic preparedness are all facing similar issues that require similar solutions. Collective national responses are required to ensure economic viability of infrastructure investments for pandemic/biosecurity preparedness e.g. vaccine production facilities or development and deployment of more automated National general surveillance systems etc. An integrated approach for all three systems will strengthen efficiencies and reduce workload across the board.

2. Roles within the Biosecurity System

Can you see your current role within the biosecurity system reflected in the consultation draft? – Do you think the 'How our biosecurity system works' diagram (page 15) reflects your role and responsibilities in the biosecurity system? If not, what amendments should be made? – How do you see your own and others' roles changing into the future?

Page 14 spells out how the biosecurity system works but is incomplete. Managing domestic trade risks is a big deal for regulators and industry which is not identified up front. The importance of getting our domestic biosecurity system working to protect and grow our exports has not been highlighted enough. Page 12 lists the direct effect to trade of a new pest or disease incursion, which while true, ignores the benefits internationally of being recognised as having a trusted, world class biosecurity system when it comes to negotiating and maintaining trade. This is arguably more important and a high priority for producers and state governments supporting trade.

The primary responsibilities diagram on page 15 is not very informative. It primarily defines roles and responsibilities as overlapping rather than integrated which is the real basis for shared responsibility and connectedness.

The role of indigenous Australians also appears to have been largely pigeonholed into the 'ranger program' (e.g. page 17). Indigenous Australians have a key role to play in the 'respond' and 'recover and adapt' parts of the system as Australia's largest land custodians and knowledge holders on Country.

3. Biosecurity risks and opportunities

Are there any key risks and opportunities not captured in the consultation draft? – Do any of the biosecurity risks or opportunities outlined in the consultation draft have additional implications for our 6 priority areas?

Trade advantages through the ability to access higher value markets is a significant opportunity from an effective biosecurity system, which is not explicitly covered enough in the Consultation Draft.

While there is recognition of the importance of biosecurity activities at the pre-border, border and post-border levels, there is little discussion on the importance and need for investment in prevention activities such as predicting and anticipating biosecurity risks. The activities within 'coordinated preparedness and response' mainly focus on preparedness as an activity once an incident has occurred, rather than preparedness being an activity where a threat is anticipated and prevented. This is particularly important for addressing increased threats due to the changing global biosecurity environment, which is covered in the document.

The Commonwealth Biosecurity 2030 roadmap presents in much more detail the aspects of the biosecurity system that need to be better developed offshore through working internationally to ensure we can prevent arrival. Offshore biosecurity is poorly covered as an opportunity for improving the biosecurity system in the Consultation Draft.

4. Actions

What are your views on the proposed initial actions? – What other actions should be included to deliver our 6 priority areas, address biosecurity risks and capitalise on our opportunities for change? – How can you contribute to achieving our 6 priority areas?

Shared biosecurity culture – a key missing action here is promoting the benefits of an effective and efficient biosecurity system to all Australians e.g. through regular national awareness campaigns

Stronger partnerships – the initial actions make sense, however there is no explicit recognition of what has already been achieved and what is already happening. There is, therefore, no understanding of where we are now and where we want to get to, so how will we be able to measure progress?

Highly skilled workforce – a key missing action here is enabling a biosecurity service industry built on new technology developments that will create a larger skilled workforce in biosecurity by creating businesses and jobs.

Coordinated preparedness and response – better coordinated preparedness and response requires innovation and improving the way they are undertaken. Real improvements will largely be driven by technology innovation, but this needs to be supported by cultural and institutional adaptation to novel disruptive technologies, systems and solutions e.g. reliable on-farm diagnostic testing technologies. Better coordination is required but so are improvements (new ways of coordination) that new technologies can provide.

Sustainable investment – A lot of the proposed actions are already happening so it is hard to see what will change/improve through the proposed Actions. The step change for investment needed for the national biosecurity system is a technology empowered private sector where earlier detection and response is possible creating direct new value to industries leading to the creation of an active SME sector in biosecurity services. This is already starting to happen, but needs support to grow. This transforms the National Biosecurity System from one that is paid for by government to one that attracts private investment and creates new businesses and jobs. Achieving sustainable investment is, therefore, built on the development of strong private sector biosecurity value propositions both in production systems and across value chains.

Integration supported by technology and data – The Actions here relate mostly to digital processes and data sharing which is too narrow. The science needed to improve biosecurity is inadequately covered in the Actions, the Actions need to relate back to the three active National Biosecurity RD&E Strategies which already define the research and development need.

5. Implementation and review

What mechanisms should be established to ensure stakeholders are involved in the further development of actions and implementation planning? – How regularly should the strategy be reviewed? – How should we monitor and evaluate the success of the national strategy and implementation plans?

The strategy needs to develop these initial Actions into specific, measurable, achievable, relevant, and time-bound (SMART) Actions as part of the next stage of the Strategy development which can then be delivered through annual implementation plans into which is embedded monitoring and evaluation of the Actions via a recognised framework (e.g. Program Logic).

Senate Standing Committee on Rural and Regional Affairs and Transport

Inquiry into the adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease

Questions taken on notice

Question 1

HANSARD excerpt

Senator CICCONE: Okay. And what about the vaccines? Have you ever been in a similar forum discussing vaccines?

Dr Drew: Yes. I have been in the forum of the Animal Health Committee, where the potential for use of vaccines was discussed. There are essentially two main ways that you could use such a vaccine. The first is in a suppressive vaccination, where you provide a ring vaccination around an outbreak, and this is theoretically supposed to prevent the onward spread of the disease, or at least suppress the spread.

Senator CICCONE: When did this meeting occur? Dr Sheppard: On 7 July.

Senator CICCONE: Were there any other discussions on vaccines under the last government as well?

Dr Drew: As I recollect, there was a meeting of the Animal Health Committee in Darwin. I don't recollect—

Senator CICCONE: Can you take that on notice, just in the interests of time, please—all the meetings?

Dr Drew: Yes, of course

CSIRO response

Several foot and mouth disease-related topics were discussed at a meeting of the Animal Health Committee on 10-12 May 2022, in Darwin. Attendees included DAFF, State & Jurisdictional Chief Veterinary Officers, CSIRO and industry observers. DAFF provides the secretariat for the meeting.

There was discussion of:

- Critical control gaps
- Cost-benefit analysis of different outbreak control scenarios, using the Australian Animal Disease Spread Modelling framework (AADIS) model
- Arrangements for compensation for consequential losses
- The recent outbreak in Indonesia
- Timelines for vaccine supply and effects on disease status under different deployment scenarios
- Role of feral animals in outbreaks
- Border measures being implemented.

Question 2

HANSARD Excerpt

CHAIR: Thank you for that. I've just got one final one. You mentioned earlier the CSIRO submission to the biosecurity strategy. Is that public? That might be for someone else.

Dr Sheppard: It was certainly sent in through the public process, so, assuming that all of those submissions are online, it will be public. But we can provide it—

CHAIR: Could you take on notice if you can provide us with a copy.

Dr Sheppard: Sure. We can certainly provide you with a copy, absolutely.

CHAIR: Okay. That's fantastic.

Ms Rose: If it's public, Senator, then we can provide a copy.

CHAIR: If it is and you can provide it to the committee, that would be great. When was that submitted?

Dr Sheppard: I think it was back in January, when the call went out.

CHAIR: Okay.

Dr Sheppard: It was within the time frame of the call.

CHAIR: Maybe you could take that on notice, to get us the date

CSIRO response

- CSIRO submission to national biosecurity strategy

A copy of CSIRO's submission to the National Biosecurity Strategy can be found at https://haveyoursay.agriculture.gov.au/national-biosecurity-strategy/widgets/371893/documents and is also attached

- Date of submission

18 March 2022

Written Questions on Notice

6. Does the Bos Indicus prevalence in northern herds provide any protection against the incursion or spread of foot and mouth disease?

- There is some indication in other parts of the world where FMD is endemic that *Bos Indicus* do not show clinical lesions as much as *Bos Taurus*. This may not indicate a difference in susceptibility to infection and there is no suggestion that this provides protection against an incursion of FMD in Australia.

18. Can Kangaroos spread FMD? How do we know they do not?

- FMD is a highly contagious viral disease of cloven-hoofed animals.
- From a production and epidemiological perspective, we are most concerned about cattle, sheep, goats, pigs and Asian buffalo (water buffalo), species that are known to be susceptible and able to spread the infection.
- There is no evidence to suggest FMD is transmissible to kangaroos.