Wildlife Health Australia

6 July 2016

Intergovernmental Agreement on Biosecurity Independent Review Panel
GPO Box 858
Canberra City ACT 2601

Dear Intergovernmental Agreement on Biosecurity (IGAB) Independent Review Panel,

WILDLIFE HEALTH AUSTRALIA (WHA) SUBMISSION: IGAB REVIEW

Please find attached a submission to the Panel regarding feral animals, native wildlife and disease and Australia's IGAB. We have structured our submission to provide feedback to the specific questions raised in the Panel's discussion paper: "Is Australia's national biosecurity system and the underpinning Intergovernmental Agreement on Biosecurity fit for the future?" and include a summary of our key comments and suggestions. We also provide background information for the Panel on the importance of wildlife and feral animals to Australia's biosecurity and Australia's peak body for wildlife health, Wildlife Health Australia (WHA).

The development of IGAB has been a triumph for NBC, the Australian government, AHC and other Australian governments. It is remarkable what has been achieved so quickly and with so few resources. IGAB can only improve with time. Despite the challenges and complexity, there are many who support and believe in a better biosecurity system for Australia. Those working on IGAB should justifiably feel proud of what has been achieved.

We are happy to discuss this submission with you face to face should you feel it would assist the Panel. We hope that our submission helps you with this important work.

Best Wishes,

Rupert Woods

Rupert Woods AM
CEO, WHA

WILDLIFE HEALTH AUSTRALIA (WHA) SUBMISSION: INTERGOVERNMENTAL AGREEMENT ON BIOSECURITY INDEPENDENT REVIEW

SUMMARY OF KEY COMMENTS AND SUGGESTIONS

- **Wildlife can be either a reservoir of disease affecting domestic animals or people (or other wildlife) or victims of disease themselves and pose a threat to Australia's natural environment, human health and future biosecurity**. Failure to rapidly identify and respond to an incursion can also have flow-on effects upon Australia's trade and market access. Australia's current wildlife health system is almost entirely driven by agricultural needs.

- Changing contact between people and animals is only likely to exacerbate and increase the concerns. There is a framework in place developed over the last 15 years, but the current funding risks that it will not be able to effectively address concerns. **Future proofing and expanding this system to ensure sustainability and inclusion of diseases impacting upon biodiversity and human health is required**.

- Along with AHA and PHA, WHA (Wildlife Health Australia) fits neatly into current arrangements supporting IGAB. **Formal inclusion of WHA would be a simple and practical way of increasing stakeholder involvement in, and contribution to, NBC and IGAB activities**.

- **There are gaps in response coordination and cost-sharing arrangements for particular types of disease or pest incidents affecting wildlife**. Australia has strong arrangements for coordination and cost-sharing of responses to significant diseases of livestock and some types of environmental biosecurity incidents. However, recent issues surrounding some wildlife diseases have highlighted the fact that certain incidents are not covered by these arrangements, but may still be significant enough to require a response. NEBRA requires review.

- **Wildlife Health Australia can assist NBC and AHC** in identifying and implementing priority areas for wildlife health to support any wildlife component of the NAHS&DS, IGAB and the broader biosecurity system.

- **Though challenging, environment, protection of biodiversity, emerging diseases and impacts upon public health also need to be considered moving forward**.

- In moving forward there is, however, a need to **keep things simple, be pragmatic** and **focus on those priority areas identified and already in progress with NBC and AHC**.

COMMENTS ON CONSOLIDATED LIST OF QUESTIONS

The IGAB

1) Is the IGAB a suitable mechanism to underpin Australia's national biosecurity system in the future (10 or 20 years from now)?

Yes. Ten years. Twenty years is too far away.

Are the consolidated priority areas still appropriate?

Yes.

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

The development of IGAB has been a triumph for NBC, the Australian government, AHC and Australian governments. It is remarkable what has been achieved so quickly and with so few resources. IGAB can only improve with time. Despite the challenges and complexity, there are many who support and believe in a better biosecurity system for Australia. Those working on IGAB should be justifiably proud of what has been achieved. They have many supporters and should not feel that they are alone.

The biosecurity roundtable process, ability to subscribe to the mail list and receive relevant updates, and the engagement process around development and activities within each schedule has been particularly useful in keeping stakeholders informed of developments.

It is a time of great uncertainty and NBC and the AHC should not be afraid to lead. As we move into the more operational aspects of the IGAB schedules, there is a need to clarify governance and leadership arrangements. Delivery and sustainability will require an agreed partnership-type approach. However, somebody needs to be in charge and have ultimate responsibility for delivery. The Commonwealth has a central role in leadership providing something that the states, industry and other stakeholders cannot: leadership and coordination at a national level. There is a great deal of good will available, but leadership, good governance and simple, clear direction is needed.

3) What practical improvements to the IGAB and/or its structure would provide for an increased, but accountable, role for industry and the broader community?

Along with AHA and PHA, WHA (Wildlife Health Australia) fits neatly into current arrangements supporting IGAB. Formal inclusion of WHA would be a simple and practical way of increasing stakeholder involvement in, and contribution to, IGAB activities in the environment space—consistent with the system's underlying concept of shared responsibility.

Activities, outputs and outcomes performed by WHA that support Australia's biosecurity system and IGAB are presented in Attachment A (separate electronic file).

The role WHA plays in supporting IGAB could be more readily understood by representing WHA along with AHA and PHA in Figure 3 on p10 of the IGAB discussion paper. This would also give a better representation of current arrangements.

Agreeing to risks, priorities and objectives

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

Yes.

5) In order of importance, what do you see as the most significant current and future biosecurity risks and priorities for Australia and why?

a) Wildlife diseases as risks to Australia.

Wildlife can be either a reservoir of disease affecting domestic animals or people (or other wildlife) or victims of disease themselves. In this context, the diseases of interest could be exotic (with the potential to be introduced) or emerging or endemic in one or more species.

Of these situations, we probably have wildlife as a reservoir fairly well covered (for domestic animals and probably high profile public health risks – maybe less so for lower profile public health risks), but little understanding of the risks to wildlife themselves, in particular for exotic disease and emerging diseases. So the challenges are to do with continuing to manage wildlife as a potential reservoir of disease and also gaining a better understanding of the risks to wildlife themselves, and ensuring that appropriate systems are in place to manage those risks.

b) Insufficient investment in NAQS and general wildlife surveillance activities in northern Australia.

Northern Australia sits in clear and present danger of animal movement and disease incursions into Australia. The majority of trade sensitive diseases have wildlife as part of their ecology and spillover can occur. The longer the delay in detection the greater the risk of establishment and spread and the greater the cost of eradication or containment. The good work of NAQS needs to be recognised, strengthened and prioritised into the future.

c) Insufficient, or unclear arrangements regarding surveillance and response in the environment space.

Many diseases arise in free-living wildlife. The development of the NEBRA has been a significant achievement of NBC and IGAB. However, there are gaps in the activitation of NEBRA, which if addressed would significantly strengthen arrangements.

At a more local scale, though much good work has been done, there are often delays in determining responsibility for investigation of disease outbreaks in the wildlife.

Wildlife are hosts and/or reservoirs for important diseases and disease agents that can affect biodiversity. Some of these diseases can lead to extinction (e.g. the introduction of chytridiomycosis in frogs in Australia, psittacine (parrot) beak and feather disease and psittacine conservation, both recognised at Key Threateneing Processes by the Australian Government Department of Environment) or severely

impact upon populations (e.g. white-nose syndrome in bats in America which has not yet reached Australia).

Other wildlife diseases, which have already been introduced into Australia still have unknown impacts e.g. psittacine herpesvirus 1 (Pacheco's disease) introduced with legally traded green-winged macaws and pigeon paramyxovirus, which was believed to have been introduced through smuggling.

Improved understanding and mechanisms to better assess risk, and therefore appropriate level of response, for these types of diseases is required. Many of these gaps were identified as part of the development of the Research, Development and Extension (RD&E) Strategies under Schedule 8. The National Environment and Community Biosecurity Research, Development and Extension Strategy 2014–2017 was a significant and important achievement of IGAB, that assisted in identifying risks, priorities and objectives, however, funding flows are not readily identifiable.

d) Emerging diseases.

Wildlife are the most common source of emerging novel diseases and these diseases can impact upon environment, people and food animals (Jones et al 2008, McFarlane et al 2012).

While incursions and exotics are recognised as risks (for example chytridiomycosis, which has caused the extinction of six Australian frog species), it is also important to remember that another risk on a national scale...supported by the outbreaks of emergency animal diseases in the last 30 years, is the emergence of diseases from within Australia (for example Tasmanian Devil facial tumour disease, avian influenza, Hendra virus, Australian bat Lyssavirus, Tularaemia, Leishmania etc.).

The necessary frameworks for management of these two disease pathways support one another: a focus on detection and preparedness for incursion by exotics helps our detection and response to outbreaks in endemics and vice-versa. A third disease pathway, infection of wildlife from domestic and introduced animals to create an ongoing wildlife reservoir, is also covered by these frameworks.

In assessing and developing strategies to manage incursions of diseases with wildlife as part of their ecology that may impact on Australia's environment, these facts, including hosting of exotic diseases, spillovers and flow-on effects need to be considered.

The risks will become greater over time with changing land use, climate change, animal movements and as societal attitudes bring wildlife, livestock and people into closer contact.

Australia's current wildlife health system is embedded in our biosecurity/agriculture framework. The system focuses on surveillance and preparedness for diseases with wildlife as part of their ecology that may impact upon Australia's agricultural trade and market access. Diseases of wildlife that impact upon Australia's biodiversity and environment are presently funded at a low priority. A framework that includes wildlife reservoirs of zoonotic diseases is important for public health biosecurity and to reduce these threats/risks. Wildlife Health Australia assists Australian governments in maintaining this system.

Though much good work has been done, there is an immediate need:

a) to better bring environment and human health into Australia's wildlife health system;

b) to improve education, knowledge and awareness of diseases with wildlife as part of their ecology that may impact upon Australia's biodiversity, human health and biosecurity and to prepare for and respond to these risks;

c) to further develop Australia's national wildlife health system to support Australia's animal health specifically in the area of wildlife diseases and biodiversity impacts, and;

d) for information gathering and contingency planning for potential high risk diseases with wildlife as a part of their ecology for example those that may impact upon Australia's biodiversity and human health.

e) It is also vital in future that Australia be able to show that it is free of exotic diseases and disease agents that can affect or be carried by wildlife and feral animals that can jeopardise our trade and market access.

f) It is difficult to assess risk if what is "normal" is not known. A better knowledge of disease in our wild animals is required.

These activities are complementary, however, wildlife biosecurity information and response sources differ from production sources and need separate support. Australia's wildlife health system is almost entirely focussed on agricultural drivers. Current frameworks exist that can help, however, the gap area is in support for surveillance and preparedness for exotic wildlife diseases that could impact upon biodiversity rather than trade and market access.

Having surveillance and contingency plans in place for wildlife disease agents that are outside Australia (e.g. tuberculosis in possums, white-nose syndrome in bats) and the collection of data and risk assessment for agents introduced and within into Australia (e.g. psittacine herpes virus 1 and pigeon paramyxovirus) is important to better assist in identifying, assessing and mitigate biosecurity risks.

The better our preparedness and knowledge of the risk and distribution of such agents the better Australia can be placed to manage environmental impacts and also the flow-on effects into other areas such as agriculture and human health.

Support for framework building and the inclusion of diseases that may impact upon biodiversity and human health into Australia's general wildlife health surveillance system is required. The majority of emerging diseases and zoonoses arise in wildlife.

Are Australia's biosecurity objectives appropriately tailored to meet these risk and priorities?

Yes. However, greater emphasis could be put on ensuring that arrangements for free-living wildlife are in place.

6) Are the components and functions of Australia's national biosecurity system consistently understood by all stakeholders? If not, what could be done to improve this?

The role of stakeholders in Australia's wildlife health system is well understood. However, the role of WHA in supporting IGAB is not well understood. Of the sectors, Environment seems least aware of biosecurity risks. Do they have the necessary baseline data to detect change and assess risk? Formal recognition of the role of WHA in arrangements supporting IGAB would improve understanding by stakeholders and enable WHA to become more active in supporting messaging by NBC, AHC and Australian governments.

7) What benefits (or impediments) are there in realising a more integrated national approach to biosecurity, agreed to by key partners in Australia's national biosecurity system?

There are many benefits: improved market access, trade advantage, economies of scale and stakeholder benefits (Health, Environment and Tourism). The leadership and will are there, however, sustained direction and focus will be required and this will require sustained funding and resource commitment for all parties. The Commonwealth has an especially important role to play in this leadership, but cannot do so without a significant and long-term injection of funds to support the process. This is mission critical. Without the ability of the Commonwealth to mobilise "new money" any potential gains may be lost and Australia could very well be exposed in the future.

8) What form would this best take (for example, a national statement of intent or national strategy)? What are the key elements that must be included?

A brief national statement of intent could be rapidly drafted. There is danger in attempting to develop a universal national strategy. A very large amount of time and money could be wasted in doing this. Any brief national statement of intent should include consideration and reference to biosecurity benefits to, and the role of, Health and Environment. However, the emphasis should be on putting up something, simple, practical and agreed.

A key enabler (element), that should continue to be prioritised and supported is the further development and implementation of the National Animal Health and Diagnostic Strategy (NAH&DS). A focus on agreeing and initiating this strategy will act as a focal point on which to build broader national arrangements. As with the national statement (above), consideration and reference to biosecurity benefits to, and the role of, Health and Environment should be included, but the emphasis needs to be on getting up something very simple, agreed and practical.

What specific roles do you see industry and the broader community playing in such an initiative?

Wildlife Health Australia can assist NBC in identifying and implementing priority areas for wildlife health to support any wildlife component of the NAH&DS and the broader biosecurity system.

Wildlife Health Australia's greatest strength is the ability to engage a large and varied group of stakeholders. Some of these stakeholders may not normally interact with government, but nonetheless may have valuable information about wildlife health, and can participate in discussions on wildlife health issues through WHA.

WHA also has a strong One Health focus, and collects and disseminates information of relevance to animal health, public health and environmental management. WHA brings together groups and agencies working in these fields, both at different levels of government and in the private sector, and can facilitate improved information flow.

A future challenge for WHA is in continuing to grow and develop surveillance capacity, particularly in a changing climate of disease emergence, international translocation of pathogens through travel or trade, and new developments in industries including agriculture and tourism.

Embedding shared responsibility

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

WHA stakeholders have a good understanding of their roles and responsibilities within the national biosecurity system. However, the role of WHA in supporting IGAB is not well understood. Wildlife Health Australia is the peak body supporting NBC, AHC and IGAB in the wildlife area. Formal recognition of the role of WHA in arrangements supporting IGAB would improve understanding by stakeholders and give WHA the imprimatur to more actively educate stakeholders in the benefits of a national approach and the IGAB.

Though well understood in some areas, there seems to be lesser understanding of the importance of wildlife health and biosecurity within many Environment agencies and work is required in this area. A challenge for these agencies is a lack of resourcing for biosecurity-type activities.

10) What practical actions do you think governments and industry organisations can undertake to strengthen the involvement of industry and community stakeholders in Australia's national biosecurity system? Would increased involvement in decision making on and implementation of biosecurity activities help the adoption of shared responsibility?

Formal recognition of the role of WHA in arrangements supporting IGAB would bring in wildlife and feral animals (environment and zoonotic diseases) and improve understanding by stakeholders. Increased involvement in decision making on and implementation of biosecurity activities could help the adoption of shared responsibility, however leadership is required and there is a significant role for NBC and the Australian government in this area.

Funding biosecurity

11) Are the IGAB investment principles still workable? Do they still meet the needs of Australia's national biosecurity system now and in the future?

Yes.

12) Are governments and industry investing appropriately in the right areas? Are there areas where key funders should be redirecting investment? Can investment in biosecurity activities be better targeted? If so, how? Please provide examples.

Surveillance and engagement with the environment space remain gap areas. Examples:

- The loss of the Wildlife Exotic Disease Preparedness Program has left Australia without a mechanism for funding work required to develop policy to better support the AUSVETPLAN in the area of wildlife and feral animals.
- No readily available funding flow has been identified for continued operation of Australia's wildlife health surveillance system post 2017/18. Wildlife Health Australia has no funding from July 1st 2018.

Australia's biosecurity system is only as good as its weakest links. Large amounts of money are not required. What is required is clarity of thought around purpose and priorities to support NBC and IGAB. The country needs to "Have something in place" to ensure that these gap/ risks areas are filled to support the bigger system.

- As activities of the Invasive Animal CRC wind down, the vertebrate pest area will become a gap area in future. Consideration needs to be given as to how this capability and functionality will be maintained. Any subsequent activities need to include disease, biosecurity and the needs of NBC and priorities of IGAB as part of their terms of reference. WHA is well placed to include vertebrate pests in its activities.

- Despite its importance, there appears to be a lack of sustainable funding to support Environment in its efforts to integrate biosecurity, surveillance and, where needed, asset-based protection due to disease impacts into day-to-day operations.

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

Formal recognition of the role of WHA in arrangements supporting IGAB would improve understanding by stakeholders and would allow WHA to more formally be guided and assist in implementing priorities as identified under IGAB.

14) Are current biosecurity funding arrangements still appropriate to meet the needs of Australia's national biosecurity system, now and in the future?

No. NBC, the Australia government and governments do a great job of holding together Australia's biosecurity system with very few resources. They need to be commended in their ability to make small amounts of money go a very long way. The reality, however, is that to prepare and re-shape Australia's biosecurity system to face the challenges of the future significant additional and on-going resources will need to be applied at both national and state level.

Australia has strong arrangements for coordination and cost-sharing of responses to significant diseases of livestock and some types of environmental biosecurity incidents. However, recent issues surrounding some wildlife diseases have highlighted the fact that certain incidents are not covered by these arrangements, but may still be significant enough to require a response (e.g. activation of NEBRA for the Bellinger River Turtle Response). This may lead to suboptimal response to particular pest or disease incidents, frustration on the part of stakeholders and poor public perception of the management of these responses. NEBRA requires review.

Increased funding and resources for Environment agencies to assist in management of biosecurity incidents to support IGAB appears to be required.

What might an alternative or novel funding model encompass?

Given its clear public good activities, lack of readily identifiable industry support and clear benefits across biosecurity, health and environment, there is a strong case for continued tax payer funding of WHA. However, funding flows are not currently readily identifiable. Alternative or novel funding models could encompass: hunter, tourist and national park entry fee levies, a future fund, the public and industry/ corporates. Wildlife Health Australia is examining the development of a public fund to help raise funds to support on the ground

wildlife health investigations. Terms of reference are still to be developed, however the emphasis is likely to be on providing support for on-the-ground activities at jurisdictional level. Though a great success for NBC, AHC and stakeholders, core funding of the national wildlife health system remains problematic.

15) What can be done to ensure an equitable level of investment from all stakeholders across Australia's national biosecurity system, including from risk creators and risk beneficiaries?

Environment and human health are a gap area where funding flows are not readily identifiable. Risk beneficiaries include hunters, tourists/ the public and a levy system, or investment by Australian governments are appropriate. Though much is said about "One Health", however, operationalising this area has proven problematic. The AMR strategy is a focus point that could be used to assist in working through the development of shared approached to issues of mutual concern between agencies. Key Threatening Processes and wildlife disease are another point of intersection.

Market access

16) Are market access considerations given appropriate weight in Australia's national biosecurity system?

Our experience has been that there appears to be a lack of understanding of the importance to Australia of its biosecurity system and disease free status across many areas of the Australia community.

What other considerations also need to be taken into account?

Environment, protection of biodiversity, emerging diseases, zoonoses and impacts upon public health. The value of healthy wildlife to Australia's economy.

17) Are there ways governments could better partner with industry and/or the broader community to reduce costs (without increasing risk), such as industry certification schemes?

The AHA, PHA model is a good one. A similar partnership approach could be considered for WHA, which as a peak industry liaison body has the ability to significantly lever government funding for outcomes in the national interest. **Formal engagement and support by Environment and Health with and for WHA would potentially lead to a significantly improvement in biosecurity outcomes in the environment and human health spaces for these agencies and for Australia**.

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

Strategies for identification and management of exotic wildlife diseases that could impact upon Australia's biodiversity and human health should be developed and integrated into Australia's current wildlife health biosecurity framework.

There are opportunities to quickly and easily build upon existing structures. Expanding the activities of WHA, whose current focus is trade and agriculture, to include a focus on diseases of wildlife that may impact upon human health and biodiversity offers a cost-effective mechanism to support government and industry.

In a world where the majority of new and emerging diseases arise in wildlife, support for wildlife diagnostic capability within Australia's CSIRO AAHL, regional laboratory network and LEADRR program is a necessity. There are also opportunities to partner with regional diagnostic centres within universities and others with dedicated wildlife laboratory capability to support bigger national programs.

Wildlife Health Australia has been strengthening active wildlife health surveillance by expanding it's network to include zoos, sentinel veterinary practices and university veterinary faculties since 2010. Because the majority of work is performed pro bono, there are, however, often significants delays in pathology turnaround. The rapid diagnosis and/ or exclusion of biotoxins as a differential in the cause of wildlife diseases is also a gap area.

The role of research and innovation

19) Which specific areas of Australia's national biosecurity system could benefit from research and innovation in the next five, 10 and 20 years and why? Please provide examples.

Environment, wildlife and invasive animals:

- The loss of the Wildlife Exotic Disease Preparedness Program has left Australia without a mechanism for funding work required to research and develop policy to better support the AUSVETPLAN in the area of wildlife and feral animals.

- As activities of the Invasive Animal CRC wind down, the vertebrate pest area will become a gap area in future. Consideration needs to be given as to how this capability and functionality will be maintained. Any subsequent activities need to include disease, biosecurity and the needs of NBC and priorities of IGAB as part of their terms of reference. Priorities have been identified for vertebrate pest disease research, surveillance and preparedness activities as part of a review of wildlife exotic disease preparedness in Australia (Henderson 2008) and could be adopted.

- Many of the gaps, rationale and priorities for research in the environment area were identified as part of the development of the Research, Development and Extension (RD&E) Strategies under Schedule 8. The National Environment and Community Biosecurity Research, Development and Extension Strategy 2014–2017 was a significant and important achievement of IGAB, that assisted in identifying risks, priorities and objectives, however, funding flows are not readily identifiable.

Human health and wildlife:

- The majority of zoonoses arise in wildlife. Risks will only increase as climate change and increasing urbanisation bring people and wildlife into closer contact.

Research in these areas would provide benefit because Australia's biosecurity system is only as strong as its weakest link. These are gap areas, the majority of emerging diseases arise in wildlife, spillover can occur and the mechanisms for developing evidence-based decision-making around policy and implementation are lacking. Australia has one of the best biosecurity systems in the world: can we afford to leave these holes in it?

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

- Dedicate funding for coordination first and research second. The importance of support for a long-term, coordinated problem solving framework cannot be over stated. The

research is easy: it is national coordination and providing a long-term mechanism to focus and activate all of our resources in the national interest that is difficult.

- Implementing the priorities as identified in a review of wildlife exotic disease preparedness in Australia (Henderson 2008) and the National Environment and Community Biosecurity Research, Development and Extension Strategy 2014–2017. This could be included in the terms of reference of any subsequent development following winding down of the Invasive Animal CRC.

- In the wildlife space, WHA is considering better activation of Australian universities to support the national need through its universities focus group. This could include consideration of development of a more effective coordination mechanism for research underpinning biosecurity and the national need.

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

The key area of need is in development of data sharing and more effectively utilising current data sources. With the exception of a national data warehouse, the emphasis should be on development of business rules to allow data sharing rather than technical fixes.

Active surveillance could be strengthened by smart phone apps to increase awareness, detection, reporting and investigation of wildlife diseases.

Measuring the performance of the national biosecurity system

22) What does success of Australia's national biosecurity system look like? How could success be defined, and appropriately measured (that is, qualitatively or quantitatively)? What, if any, measures of success are in use?

For the wildlife space, success would be to hardwire WHA into national arrangements to support IGAB, Australia governments and the states and territories.

23) What would be required to ensure data collection and analysis meets the needs of a future national biosecurity system? Who are the key data and expert knowledge holders in the national biosecurity system?

The key area of need is in development of agreed business rules to allow data sharing and reporting.

Wildlife Health Australia maintains the National Wildlife Health Information System, which is the key data repository for wildlife health surveillance information in Australia.

24) How can existing or new data sets be better used?

Wildlife is one of the few areas where we actually are successfully collecting data from non-government sources on a regular basis. The key to this success has been in the vision and support provided by the Australian government and the emphasis on national coordination and commitment to long-term framework building.

Wildlife Health Australia maintains the National Wildlife Health Information System, which is the key data repository for wildlife health surveillance information in Australia. Business rules for data submission and sharing are well understood, however to go to the next level,

clear direction is required from the bigger national system as to information required and the nature of reporting. The key to further development of this area is in development of agreed business rules to allow data sharing, mining and reporting by NBC and the IGAB (above).

How might data be collected from a wider range of sources than government?

An important role for WHA is to identify non-government wildlife health data sources and bring these into the mainstream reporting mechanisms for Australia. As part of its support for the NAHS&DS, WHA has a series of priorities for expanding its capture of data from these sources to support the national interest (zoos, sentinel veterinary practices, university veterinary faculties). Wildlife Health Australia is in a unique position to very efficiently lever activities to support the national need. Funding, however, remains problematic.

ADDITIONAL INFORMATION FOR THE PANEL ON THE IMPORTANCE OF WILDLIFE HEALTH TO AUSTRALIA'S FUTURE BIOSECURITY AND THE PEAK BODY FOR WILDLIFE HEALTH IN AUSTRALIA, WILDLFIE HEALTH AUSTRALIA (WHA)

THE IMPORTANCE OF WILDLIFE HEALTH TO AUSTRALIA'S FUTURE BIOSECURITY

Diseases and disease agents of feral animals and wildlife pose a threat to Australia's natural environment, human health and future biosecurity:

- Wildlife are hosts and/or reservoirs for important diseases and disease agents that can affect the environment and biodiversity. Some of these diseases can lead to extinction (e.g. the introduction of chytridiomycosis in frogs in Australia) or severely impact upon populations (e.g. white-nose syndrome in bats in America which has not yet reached Australia).

- Other wildlife diseases, which have already been introduced into Australia still have unknown impacts e.g. psittacine herpesvirus I introduced with legally traded green-winged macaws and pigeon paramyxovirus, which was believed to have been introduced through smuggling.

- Wildlife are also hosts and/or reservoirs for important exotic diseases and disease agents that can affect trade and market access (e.g. another exotic disease, tuberculosis which is present in possums in New Zealand) and detection of disease and disease agents in wildlife, and the lack of evidence of absence to satisfy trading partners, can impact upon trade and market access.

- Furthermore, Australian wildlife are susceptible to many of the important exotic emergency diseases of production animals and, if introduced and established, spillover to humans and food animals can occur (e.g. most other exotic diseases of concern to us including foot and mouth disease, classical swine fever, Nipah virus, Surra etc).

- Wildlife are also the most common source of emerging novel diseases and these diseases can impact upon environment, people and food animals (Jones et al 2008, McFarlane et al 2012).

- While incursions and exotics are recognised as risks (for example chytridiomycosis, which has caused the extinction of six Australian frog species), it is also important for the Committee to remember that another risk on a national scale...supported by the outbreaks of emergency animal diseases in the last 30 years, is the emergence of diseases from within Australia (for example Tasmanian Devil facial tumour disease, avian influenza, Hendra virus, Australian bat Lyssavirus, Tularaemia, Leishmania etc.). However, the necessary frameworks for management of these two disease pathways **support one another**: a focus on detection and preparedness for incursion by exotics helps our detection and response to outbreaks in endemics and vice-versa.

In assessing and developing strategies to manage incursions of diseases with wildlife as part of their ecology that may impact on Australia's environment, these facts, including hosting of exotic diseases, spillovers and flow-on effects need to be considered.

The risks will become greater with changing land use, climate change, animal movements and as societal attitudes bring wildlife, livestock and people into closer contact.

AUSTRALIA'S STATE OF PREPAREDNESS FOR NEW INCURSIONS

Australia's current wildlife health system is embedded in our biosecurity/agriculture framework. The system focuses on surveillance and preparedness for diseases with wildlife as part of their ecology that may impact upon Australia's agricultural trade and market access. Diseases of wildlife that impact upon Australia's biodiversity and environment are a low priority. Wildlife Health Australia assists Australian governments in maintaining this system.

Though much good work has been done, there is an immediate need:

- to better bring Environment and Health into Australia's wildlife health system;
- to improve education and knowledge of diseases with wildlife as part of their ecology that may impact upon Australia's biodiversity, human health and biosecurity and to prepare for and respond to these risks;
- to further develop Australia's national wildlife health system to support Australia's animal health specifically in the area of wildlife diseases and biodiversity impacts, and;
- for information gathering and contingency planning for potential high risk diseases with wildlife as a part of their ecology that may impact upon Australia's environmental biosecurity.

It is also vital in future that Australia be able to show that it is free of exotic diseases and disease agents that can affect or be carried by wildlife and feral animals that can jeopardise our trade and market access.

These activities are complementary, however, wildlife biosecurity information and response sources differ from production sources and need separate support. Australia's wildlife health system is almost entirely focussed on agricultural drivers. Current frameworks exist that can help, however, **the gap area is in support for surveillance and preparedness for exotic wildlife diseases that could impact upon environment** rather than trade and market access.

THE SOLUTION: SURVEILLANCE, CONTINGENCY PLANNING AND THE INTEGRATION OF WILDLIFE DISEASES THAT MAY IMPACT UPON ENVIRONMENT INTO NATIONAL ARRANGEMENTS

Having surveillance and contingency plans in place for wildlife disease agents that are outside Australia (e.g. tuberculosis in possums, white-nose syndrome in bats) and the collection of data and risk assessment for agents introduced and within into Australia (e.g. psittacine herpes virus I and pigeon paramyxovirus) is important to better assist in identifying, assessing and mitigate biosecurity risks.

The better our preparedness and knowledge of the risk and distribution of such agents the better Australia can be placed to manage environmental impacts and also the flow-on effects into other areas such as agriculture and human health.

Support for framework building and the inclusion of diseases that may impact upon biodiversity and human health into Australia's general wildlife health surveillance system is required.

PRIORITY ACTIONS: INCLUSION OF WILDLIFE DISEASES THAT MAY IMPACT UPON ENVIRONMENT IN AUSTRALIA'S WILDLIFE HEALTH SYSTEM

Strategies for identification and management of exotic wildlife diseases that could impact upon Australia's environment must be developed and integrated into Australia's current wildlife health biosecurity framework.

There are opportunities to quickly and easily build upon existing structures. **Expanding the activities of Wildlife Health Australia, whose current focus is trade and agriculture, to include a focus on diseases of wildlife that may impact upon the environment, biosecurity and biodiversity is the obvious solution**.

Utilising existing structures, complementarity rather than redundancy or competition, and the need to engage the states and territories in meaningful ways need to be considered. **There are gaps in response coordination and cost-sharing arrangements for particular types of disease or pest incidents affecting wildlife.** The NEBRA needs to be reviewed to enable these gap areas to be better identified and closed.

RELEVANT TECHNICAL INFORMATION SUPPORTING OUR COMMENTS OR PRIORITY ACTIONS

Henderson, W (2008) Workshop Proceedings — Review of wildlife exotic disease preparedness in Australia. Invasive Animals Cooperative Research Centre, University of Canberra, ACT 46pp.

Jones KE, NG Patel, MA Levy, A Storeygard, D Balk, JL Gittleman, P Daszak (2008) Global trends in emerging infectious diseases. Nature 451:990-995.

McFarlane R, A Sleigh and T McMichael (2012) Synanthropy of wild mammals as a determinant of emerging infectious diseases in the Asian–Australasian region. EcoHealth 9(1):24-35.

ABOUT WILDLIFE HEALTH AUSTRALIA

Wildlife Health Australia (WHA) is the peak body for wildlife health in Australia and operates nationally. The head office is located in Sydney, NSW.

WHA activities focus on the increasing risk of emergency and emerging diseases that can spill over from wild animals and impact on Australia's trade, human health, biodiversity and tourism. We provide a framework that allows Australia to better identify, assess, articulate and manage these risks. We provide the framework for Australia's general wildlife health surveillance system.

Our mission is to develop strong partnerships in order to better manage the adverse effects of wildlife diseases on Australia's animal health industries, human health, biodiversity, trade and tourism.

WHA directly supports the Animal Health Committee (AHC), Animal Health Australia (AHA), the Animal Health Policy Branch and the Office of the Chief Veterinary Officer (OCVO) within the Australian Government Department of Agriculture and Water Resources (DAWR) and Australian governments in their efforts to better prepare and protect Australia against the adverse effects of wildlife diseases. It provides priorities in wildlife disease work, administers Australia's general wildlife disease surveillance system as well as facilitating and coordinating targeted projects. Wildlife health intelligence collected through the National Wildlife Health Information System (eWHIS: http://www.wildlifehealthaustralia.com.au) administered by WHA is provided to members of AHC and the Australian Government DAWR, and Departments of Health (DoH) and Environment (DoE), on issues of potential national interest, potential emerging issues and significant disease outbreaks in wildlife. The information is provided in line with the agreed policy for data security. WHA supports the NAHIS by provision of quarterly reporting and the ACVO by hosting the OIE Wildlife Health Focal Point.

WHA is administered under good organisational governance principles. An elected management group, chaired by an appointment from DAWR, and including an AHCV representative provides strategic direction and advice to a small team, which oversees the running of WHA. It is important to note that WHA involves almost every agency or organisation (both government and NGO) that has a stake or interest in animal and wildlife health issues in Australia. There are over 35 member organisations and more than 600 wildlife health professionals and others from around Australia and the rest of the world who have an interest in diseases with feral animals or wildlife as part of their ecology that may impact on Australia's trade, human health and biodiversity.

More information on WHA is available at: http://www.wildlifehealthaustralia.com.au.