



7 September 2018

Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Sir or Madam,

**WILDLIFE HEALTH AUSTRALIA (WHA) SUBMISSION: AUSTRALIA'S FAUNAL EXTINCTION
CRISIS**

Please find attached a submission regarding native wildlife, their health, diseases and Australia's faunal extinction crisis. We support and encourage the Committee's inquiry. However, we feel that more emphasis needs to be placed on health considerations in threatened populations and a focus should be placed on development of sustainable mechanisms to enable Australia to better address the risks posed to its biodiversity by health and diseases.

The role of the Commonwealth cannot be over emphasised: for leadership, coordination and resourcing. A key question for the inquiry is whether connections between the States and Commonwealth are adequate enough (including State and Commonwealth legislation)? We also need to recognise the value of obtaining and using overseas intelligence. Our organisation, WHA, is already doing this through production of regular digests and a new role with the World Organisation for Animal Health (OIE) Working Group on Wildlife. Is this information being adequately used and supported by the Department of Environment and Energy (DEE)? Working through a small number of 'case studies', where disease has been shown to play a major role in extinction or impact on both threatened and iconic Australian species would help in better understanding and answering these questions. Chytridiomycosis in frogs, disease impacts on the orange-bellied parrot recovery program and chlamydiosis and the management of koalas could be used.

Finally, we would also like to state our support for the very good work of those working with threatened species at the DEE. It is amazing how much they manage to achieve with so few resources. Hopefully the inquiry will also recognise their commitment and give consideration as to how they can better be supported in delivering the outcomes of the inquiry.

Thank you for the opportunity to comment and good luck with this important work.

Best Wishes,

Rupert Woods AM
CEO, Wildlife Health Australia

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COMMENTS AGAINST RELEVANT TERMS OF REFERENCE

We focus our comments on the impacts of health and disease as it relates to the management of extinction in Australia's native fauna.

a. The ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species

- 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), severely impact upon populations increasing their vulnerability to extinction (e.g. Tasmanian Devil Facial Tumour Disease) or impede recovery efforts or management of endangered or iconic species (e.g. psittacine beak and feather disease and orange-bellied parrots; koalas and chlamydia). Many others have as yet unknown impacts.
- Wildlife health is a critical part of ecosystem health. As populations fragment and decrease in size and range, health and disease become more important influences on population dynamics.
- The impact is magnified in small, vulnerable populations, and disease is a risk factor in every vulnerable population of wild animals. The emergence and impact of diseases on wildlife is increasing with climate change and land use changes.
- Wildlife diseases are extremely difficult to manage unless they are identified and managed quickly. There is a need to invest in monitoring and increasing capacity for rapid response for wildlife diseases that impact upon biodiversity.
- Prevention is a far more cost-effective method than attempting to control outbreaks or eradicate disease and without a thorough understanding of the disease status of Australia's wildlife, it is very difficult to make good policy and management decisions because the level of risk is difficult to determine.

Diseases of wildlife pose a threat to Australia's biodiversity and need to be considered as a risk factor for all of Australia's threatened fauna species and in all recovery programs.

d. The adequacy of Commonwealth environment laws, including but not limited to the Environment Protection and Biodiversity Conservation Act 1999, in providing sufficient protections for threatened fauna and against key threatening processes

- The appropriateness of Commonwealth environment laws is important, however another key question for the inquiry is whether connections between the States and Commonwealth are adequate enough, including State and Commonwealth legislation.

- Nationally agreed/Commonwealth instruments relevant to health and disease include the National environmental Biosecurity response Agreement (NEBRA) and the Intergovernmental Agreement on Biosecurity (IGAB).
- The NEBRA makes a significant contribution to Australia’s biosecurity arrangements for environment, including native fauna. However, recent experience with some wildlife health events has **identified gap areas** that require further consideration specifically for **wildlife disease events where an aetiology cannot be identified, the feasibility of eradication is uncertain, benefit-cost cannot be determined or risk assessment is protracted or not possible**. These are very common scenarios in wildlife health incidents, are likely to become more common, and without arrangements that account for them it is doubtful that the NEBRA will be able to be activated for wildlife disease events.
- There are also tensions between eradication of the organism and the host: stamping out may simply not be possible with an endangered species. As we recently saw with the Bellinger River turtles (NSW), national significance criteria may not be able to be applied because the species concerned is not listed, or listing may take a protracted period.
- The ultimate need is the ability to be able to act in the absence of information and better manage uncertainty.

Facility is needed within the NEBRA to ensure that the special cases that wildlife disease presents can be managed, and in the case of endangered or listed species, that precautionary principle can be applied.

- The IGAB has just been reviewed (IGAB Review) (Craig *et al.* 2017). A priority gap area identified for action is environmental biosecurity.

Recommendations of the IGAB Review in the area of environmental biosecurity need to be adopted by Australian governments.

There is a need for increased clarity and agreement between environment and biosecurity agencies at state, territory and national government levels around roles and responsibilities for wildlife health incidents involving native fauna and endangered species and what constitutes “normal commitments”.

e. The adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general

- Funding streams for implementing threatened species recovery plans are grossly inadequate. Disease has fared better, however, despite a significant, sustained and continuing increase in wildlife disease research output since 1995 there has not been a corresponding increase in effective solutions for wildlife disease in free-ranging animals.
- The deployment of solutions even for wildlife diseases of known conservation significance in Australia (e.g. Tasmanian Devil Facial Tumour Disease, chytridiomycosis, Beak and Feather Disease Virus) has been exceptionally rare.

- Additionally, research innovation in the development and testing of effective preparedness, surveillance and responsiveness systems is lacking and significant gaps in taxonomic, geographic, temporal and ecosystem coverage are known to exist.
- Existing approaches and funding for collaborative research on wildlife disease in Australia have failed to prioritise solutions, failed to incorporate the broad multidisciplinary approach needed to develop deployable solutions, and failed to capitalise on Australia's research capacity through transparency and good governance in organising research collaboration.
- The disconnect between basic scientific research and effective solutions, especially relating to conservation, indicates the need for a strategic solutions-focused approach to research on wildlife disease utilising a 'translational pathway' framework, as was developed in response to an analogous disconnect between basic science and patient outcomes in human health.

A nationally led, solutions-focused collaborative and broad multidisciplinary strategy incorporating a translational framework, and with good governance and a funding model, is needed to integrate existing and potential research capacity in Australia to develop solutions for priority wildlife disease problems in endangered, listed and iconic species.

f. The adequacy of existing monitoring practices in relation to the threatened fauna assessment and adaptive management responses

Monitoring practices

- In an article identifying insights and lessons from three recent studies documenting declines in some terrestrial species in Australia, Wayne *et al.* (2017) concluded that substantial increase in effective long-term biodiversity monitoring programs in an adaptive management framework was needed and such monitoring programs will be more insightful if they also monitor factors driving population change.
- Health and disease are significant determinants of population health and impact significantly on small populations of animals. The more rapidly health and diseases issues can be identified, the more rapidly counter measures can be deployed. The identification of chytridiomycosis in Australia took 19 years, the identification of Tasmanian Devil Facial Tumour 10 years. Psittacine beak and feather disease has been recognised for many years, yet still presents decision making challenges to the good work of the Orange-bellied parrot Recovery Team. All of these disease are now listed as Key Threatening Processes. At a whole of nation level we still do not know the full extent and impact of other endemic diseases on our native fauna, and what, if anything, we should do about them.
- 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 lower priority.

- Expanding the activities of Wildlife Health Australia, whose current focus is surveillance and preparedness to support trade and agriculture, to include a focus on diseases of wildlife that may impact upon biodiversity is the obvious solution.

Our national biosecurity agency has shown great leadership in addressing wildlife health issues, the DEE less so. This is not because of a lack of understanding or recognition of need, but simply because resources are lacking. There are opportunities to quickly and easily build upon existing structures. There may also be opportunities to build on the on-going work associated with the recommendations for environmental biosecurity arising from the recent IGAB Review (Craig et al. 2017). A significant and on-going injection of “New money” will, however, be required.

Adaptive management responses

- Despite very good people being involved, adaptive management is hampered by a lack of rapidly accessible funding to support and facilitate priority work as identified by those involved. A second challenge is access to real World solutions (see e. above).
- We need to be able to understand health and disease, and the risk they pose to threatened species, and other species before they become threatened, more quickly. Rapid and timely access to information and assessment of risk ultimately improves decision making, efficiency and benefit-cost.
- 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. Failure to do so leaves Australia exposed.

Strategies for identification and management of exotic and endemic wildlife diseases that could impact upon Australia’s biodiversity must be developed and integrated into Australia’s current wildlife health biosecurity and recovery frameworks as a matter of urgency. Solutions for health and disease as population determinants that could be considered are presented above.

I. Any related matters.

Expansion of Australia’s wildlife health system to include wildlife diseases that may impact upon biodiversity

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

- bring environment into Australia’s wildlife health system
- improve education and knowledge of diseases with wildlife as part of their ecology that may impact upon Australia’s environment and biodiversity and to prepare for and respond to these risks

- 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 biodiversity.

Current frameworks exist that can help, however, the gap areas are in:

- support for surveillance and preparedness for exotic and endemic wildlife diseases that could impact upon biodiversity, and;
- development of a framework that allows the rapid identification, development and deployment of innovative solutions that address disease as a key threatening process for Australia's wildlife.

Support for our national environment agency and its people - DEE

Australia is fortunate to have the DEE and the many people committed to threatened species recovery. They are, however, grossly under resourced. We have the knowledge, we have the people, and we know what needs to be done: we simply do not have the resources. This is a critical time for Australia: do we quietly walk away, or do we stand together as a nation and say: "Not on Our Watch". If we decide on the latter approach, then we must recognise the leadership that is required of our national environment agency and commit to providing it with the on-going resources it needs to do its job. The Australian people would agree.

RELEVANT TECHNICAL INFORMATION SUPPORTING OUR COMMENTS

Craik W, D Palmer and R Sheldrake (2017) Priorities for Australia's biosecurity system, An independent review of the capacity of the national biosecurity system and its underpinning Intergovernmental Agreement, Canberra.

Wayne AF, BA Wilson and JCZ Woinarski (2017) Falling apart? Insights and lessons from three recent studies documenting rapid and severe decline in terrestrial mammal assemblages of northern, south-eastern and south-western Australia. *Wildlife Research*: 44(2) 114-126.

ABOUT WILDLIFE HEALTH AUSTRALIA

Wildlife Health Australia (WHA) is the coordinating 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 and Energy (DEE), 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 National Animal Health Information System (NAHIS) by provision of quarterly reporting and the Australian Chief Veterinary Officer by hosting the World Organization for Animal Health (OIE) Wildlife Health Focal Point. WHA also provides Australia's representative to the International Union for the Conservation of Nature Species Survival Commission Wildlife Health Specialist Group (IUCN SSC WHSG).

WHA is administered under good corporate governance principles. An elected management group, chaired by an appointment from DAWR, and including an AHC 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 40 member organisations and more than 700 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>.