BUSH HERITAGE
AUSTRALIA

Submission

In response to

The Senate Inquiry on Feral Deer, Goats & Pigs

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Bush Heritage Australia's Submission to the Senate Inquiry on Feral Deer, Goats & Pigs

Bush Heritage Australia is a national not-for-profit organisation, protecting millions of hectares of ecologically important land for the benefit of nature and all Australians. Operating nationally, Bush Heritage Australia has an interest in and influence on the protection of our native species and natural landscapes. We work primarily in 19 priority landscapes that cover a vast and diverse subset of Australia's human and environmental communities. Within these areas we are focussed on restoring ecosystem health and the viability of native species both on our reserves and across the broader landscape. Aside from carefully managing our own land, Bush Heritage Australia takes a collaborative approach to land management and biodiversity protection, engaging and working with others on the protection of these natural assets at a landscape scale. Bush Heritage is involved in a number of significant species recovery programs in both northern and southern Australia, working with Traditional Owners, other not-for-profit organisations, governments and universities. We see first-hand the impacts of invasive species, including the herbivores at the centre of this inquiry on wildlife and habitat function across the country. Thus, we welcome this inquiry and the opportunity to provide information.

In brief, Bush Heritage Australia makes six key points in relation to this submission:

1. **Level of threat**: Each of these feral animals pose a significant threat to Australian wildlife and habitats – the damage they cause is well documented and understood. These threats have particularly high impact where other threats are also operating, including from the effects of climate change.
2. **Policy settings:** The current policy settings around the control or management of feral species do not support their containment and control. Policy settings both federal and state need to be set to maximise environmental protection rather than maintain a viable population of game species for recreational hunters. Hunters have a key role in the control of these pests but need to be part of the solution not part of perpetuating the problem.
3. **Cooperation and collaboration**: Data on distribution, abundance and impact are known with sufficient detail to enable adaptive, integrated Threat Abatement Plans (TAP) to be developed immediately. These should integrate research and control programs across state borders and with industry partners and the community. These plans could be implemented with little risk of failure with appropriate investment, coordination, cross-border cooperation and community engagement.
4. **Resourcing**: All actions directed by the TAP must be enacted across all land tenures, tied to adequate funding and undertaken with sustained effort. Results need to be measured and reported.
5. **Community engagement**: All governments, working in partnership, have a key role to play in reframing public perceptions of the necessity of animal control and the long-term social, economic and environmental costs of not acting, .
6. **Relevance to other pest species:** The impacts of these feral species are significant but there are other species that must also be considered with similar focus. Actions designed to control deer, pigs and goats may also inform the control efforts for other pest species.

Bush Heritage Australia

Submission to the Senate Inquiry into Australia's Fauna Extinction Crisis

Terms of Reference:
Specific questions on the impact of feral deer, pigs and goats in Australia, and national priorities to prevent the problems worsening for the natural environment, community and farmers:

a. The current and potential occurrence of feral deer, pigs and goats across Australia

There is a significant amount of information in the published literature regarding the current and potential occurrence of these species across the Australian landscape. We commend the work by the Invasive Species Council to raise awareness of the growth and expansion of invasive species populations across the country. In particular, the expansion of six feral deer species (sambar, rusa, red, chital, fallow and hog deer) as key threatening processes to 18 species and ecological communities.
Here, Bush Heritage provides a summary of our direct observations and experience with these invasive species.

Pigs
Pigs occur and can exploit almost all environments, even deserts in the right season when daytime temperatures are low and surface water is available. Their potential to spread is almost unlimited.
Cape York, Qld: Of particular concern to Bush Heritage has been the expansion and increasing impact of feral pigs in Cape York where they destroy wetland habitat, modify the vegetative structure and either consume or make inedible precious seeds that are the life blood of the Golden-shouldered Parrot or Alwal – the totem of the Olkola people. Apart from the immediate impacts are the flow-on effects of attracting hunters who use dogs to find and bring down pigs. These expeditions do not always recover all dogs, which has resulted in a rapid increase in feral dogs that are trained to hunt, and now roam the Cape. The damage caused by these dogs to sheep and cattle has increased the baiting and shooting of all dogs, including dingoes, despite the recent evidence that dingoes provide an economic benefit to cattle farmers.

Yantabulla Swamp in north western NSW: There has been a rapid expansion of the pig population in Yantabulla Swamp which is now a conservation reserve owned by South Endeavour Trust and managed under contract by Bush Heritage. The local pig population was estimated at about 10,000 following an aerial operation some years ago. On the neighbouring Bush Heritage reserve, Naree Station, animals are regularly seen, trapped and shot with, approximately 45 shot over both stations (Yantabulla and Naree) from July to October 2018. At least the same number have been observed but not shot. The damage to the fragile wetland habitats is significant.

Goats
Rapid reproduction, hardiness, an ability to climb trees and their generalist eating habits, mean goats can adapt to most environments, change the structure of large areas of habitat and damage all parts of individual trees. Together with their impact on the soil from their hard hooves, these characteristics make them one of Australia's greatest threats to plant life, soil health and habitat structure across the continent. The habitat range that goats can exploit is almost unlimited with the exception of dense rainforest and waterless environments, but again, populations are able to expand

into and exploit arid areas in good seasons.
The "legitimate" harvesting of wild herds by farmers increases the problem by diluting, delaying or discouraging formation of appropriate legislation to control goats. Some young animals and females are also released back into the landscape to maintain a breeding population to support the 'harvesting' industry. This means there is a continual flow of animals through natural areas and ongoing degradation of soils and vegetation, which has flow-on effects for other species. It also means that goats continue to reinvade areas previously cleared of animals, requiring ongoing costs and time by diligent land owners.

Bush Heritage is required to manage goats on many of its semi-arid properties through trapping and mustering. This requires significant resourcing and thus adds a burden of costs onto the organisation.

The Bounceback Program in South Australia, which was a major collaborative effort between government, non-profit organisations, regional authorities and property owners, demonstrated the effectiveness of an integrated and coordinated approach to regional control of a pest species. It was successful in reducing the population of goats to a level that can now be managed effectively by concerned property owners with the support of the Sporting Shooters Association. The recovery of the Chenopod shrublands, grasslands, woodlands and rocky ranges in the Olary region of SA has been significant following this initial intervention and ongoing control. This program sets a precedent for how effective control measures can be planned, conducted and maintained through a well-coordinated and well-resourced program. We would recommend that the Bounceback Program be used as a model for further goat control efforts, and the model also be trialled on deer and pigs, particularly in isolated populations – such as deer in the Gariwerd (Grampians) National Park in Victoria.

At the two reserves managed by Bush Heritage in western NSW there is an estimated population of 200+ animals despite ongoing trapping and mustering because animals continue to move in from the surrounding landscape. Approximately 40 were trapped and 25 shot on Naree Station and 57 on Yantabulla Swamp from June to October this year.

Deer
Deer can spread almost anywhere, from alpine regions to semi desert sandy heathlands, and can increase in number rapidly with the right nutritional conditions. For example, as has been seen recently in South-East Australia, a boom in vegetation regrowth following the Black Saturday fires in 2009 is the most likely reason for the rapid population increase and range expansion of these invasive species. There is no natural control mechanism from a top-order predator given there are few dingoes remaining in the landscape and hunting is inadequate to restrict the deer population.

b. The likely and potential biosecurity risks and impacts of feral deer, pigs and goats on the environment, agriculture, community safety and other values

The biosecurity threats represented by these species are not within the core of Bush Heritage expertise, however of these feral herbivores, the pig presents the greatest biosecurity risk in terms of zoonotic diseases. Deer are also potential carriers of Foot and mouth disease and vectors of parasites, such as Crytosporidium, that can contaminate drinking water reservoirs. This is particularly relevant as deer move into forests and peri-urban areas where drinking water storages are located. Further, changes in all the species' ranges with climate change and the expanding human population and spread of residential areas, will instigate new and increasing interactions of the kind that drive the periodical Nippa, Hendra and Lyssa outbreaks. For specific advice on these issues and prevention, we refer you to the Wildlife Health Australia (www.wildlifehealthaustralia.com.au).

Physical injuries caused by aggressive or threatened pigs or rutting deer can also posed dangers to livestock, people and their pets. As population numbers of deer increase and animals move closer to

residential areas they are increasingly causing motor vehicle accidents, some of which include injuries to drivers and/or their passengers or even death. The ecological and economic damage now attributable to deer warrants immediate attention and intervention, beyond the current passive controls. Agricultural enterprises such as vineyards and orchards can sustain significant losses from deer browsing, rutting and wallowing. National Parks and other conservation land are degraded by the activities of all these feral species.

Deer and pigs also uproot potentially sensitive vegetation, create wallows in wetlands and other water points, muddy natural waterways and break down stream banks. This impacts on native species and stream and wetland health, and has financial consequences for land managers.

c. The effectiveness of current state and national laws, policies and practices in limiting spread and mitigating impacts of feral deer, pigs and goats

Effectiveness of national and state laws:
Current laws are not effective at providing incentives or otherwise enabling the initial intensive, and then ongoing, effort that is required to control or contain populations of these pests. In Victoria, deer are still classified as 'Protected wildlife' and 'Game species' under the *Wildlife Act 1975*, despite Sambar deer now being recognised as a threatening process under the *Flora and Fauna Guarantee Act 1988*. These species still cannot be taken without authorisation, however, a recent amendment to this legislation now allows land owners to control problem animals that are causing damage on their land. This anomaly, to have animals listed as protected wildlife, has been driven by the hunting lobby that wishes to maintain a hunting resource, and thus the recreational interests of a (relative) few are compromising the economic viability of an increasing number of agribusinesses and many conservation lands.

The Federal government has a role to work with the states to amend spurious laws and put environmental protection and the needs of farmers above the interests of hunters. However, hunters have a critical role to play in controlling all these pest species and if engaged as partners in the design and implementation of control programs, will likely contribute significantly to the control of these pest populations. Incentives to take female animals rather than trophy males, support to develop a commercial deer harvest industry and serious penalties for the release into the wild of farmed deer or goats, could assist in helping managing populations.

Listing each of these species as a key threatening process under the *EPBC Act 1999* would provide an avenue for threat abatement plans that could deliver high profile, highly effective collaborative action across large landscapes. These threat abatement plans must be accompanied by sustained funding to provide certainty and deliver measurable progress year on year. The management and abatement of these threats will require effort and on-going funding to prevent further species loss and allow our ecosystems to thrive and function.

Targeted, cross tenure action has worked
Integrated control efforts have been successful in suppressing populations of these pest species, when coordinated across different land tenures and a concerted effort to achieve specific reduction goals.

The South Australian Government's Bounceback program and the intensive effort to remove Buffalo from Kakadu National Park are examples of successful, well-resourced campaigns that have effectively reduced numbers of pest species. There are other examples where, unfortunately, the impact of similar efforts has been lost when resourcing and effort were not sustained.

Opportunities for change:

- Work with state governments to review, align and amend laws to classify deer as a pest

species.

- List each of these species as a key threatening process under state and federal Acts;
- Develop, support and fund Threat Abatement Plans for each species which recognise the need to continue control measures into the future. The opportunity to implement these plans could be awarded through a tender process with strict reporting requirements and key outcomes that must be achieved to maintain the contract
- Engage local land holders, hunters and communities in control schemes that help educate and provide avenues to engage meaningfully in control measures
- Provide incentives for establishing a commercial industry for deer products.

d. The efficacy and welfare implications of currently available control and containment tools and methods, and the potential for new control and containment tools and methods

- It is essential that the policy settings support control, and not 'harvesting' or illegal or licenced hunting solely for sport. Licensed hunters will be an important part of any control program, but the hunters should be given incentives to take all animals, particularly females rather than trophy males. Illegal hunting by unlicensed hunters is more likely to create animal welfare issues and risks to human life, and penalties should be reviewed and applied.
- New technologies provide opportunities for researching innovative population control and containment methods, such as fertility control, species specific baiting and lures, and auditory or olfactory signals that broadcast predator sounds or scents.
- There is an opportunity to explore the effectiveness of targeting control measures to pre-population-boom times, usually after rainfall events or when there is increased fodder such as following a fire, to limit the population before it reaches unmanageable levels. New monitoring methods, such as motion cameras and sound recorders could be used to provide
- early warnings of an increasing population and thus prevent a population boom.
- Gene driving should be considered, but is a long way off and solutions need to be found now using technologies that are available.
- The effectiveness of a bounty on female pigs, goats and deer could be trialed among licenced hunters.
- The government has a critical role to play in bringing together the states, regional agencies, land managers, traditional owners and hunters to design and implement effective control programs.
- The government has a critical role in reframing the debate on pest species to build a social license for their control. This includes providing information on the welfare impacts on native species of not culling pests where habitats are, or are likely to be, degraded.

e. Priority research questions

There is a large body of knowledge already available to enable us to act effectively but some additional information would be helpful in delivering better control programs.
Some of these are:

- What are the levels of tolerance of browsing and trampling for critical habitats where eliminating pest species is not possible?
- How do we turn public sentiment in favour of protecting native species rather than invasive species that are destroying habitat?
- Explore humane baiting or fertility control methods for each species and the appropriate delivery techniques.
- Research the impacts of these pest species on vegetation and the flow-on impacts to native species
- Monitor and report on the progress towards achieving objectives on population control.

f. The benefits of developing and fully implementing national threat abatement plans for feral

deer, pigs and goats.
National threat abatement plans provide of the opportunity to engage widely with the community, the states and other stakeholders to implement a coordinated, effective control program. Bush Heritage believes that this model is one that has the greatest chance of success and of gaining community support. State-based control programs alone will not be as effective as they will not contain the flow of animals across state borders. It is also essential that these plans are implemented across all land tenures with public and private land managers participating actively to ensure that there is a regional reduction in the populations of pest animals. This is equally relevant no matter what the land use with impacts for farmers being as significant as for conservation land managers such as Bush Heritage. Integration of effort, community engagement and participation, and long-term resourcing will be the keys to success.