

Submission to the Natural Resources Commission-NSW Invasive Species Management Review

This submission will focus on 3 areas of the terms of reference of the management review including general comment.

As a general comment:

The NSW Governments focus on introduced species management is concerning and, in my opinion, hypocritical in that a significant portion of the states resources are directed toward management of species (such as deer and goats) which have little to no effect on our environment whilst those species which pose significant threat in terms of financial and environmental damage are generally unmanaged. Weeds threaten more than 40% of NSW threatened species (which are predominantly plants) and around 90% of endangered ecological communities. The NSW Environmental Protection Agency, lists the financial costs of damage in NSW as \$170,000,000 for animals and \$1,800,000,000 for plant species, plants causing a proportionately concern in terms of financial and environmental impact ([Invasive Species 2021 | NSW State of the Environment](#)). However little attention is placed on management of plant species, but the NSW prioritizes the management of animals such as deer and goats which have little to no directed impact on our environment only grazing. Its of concern that those priorities may arise from the push by private councils working with the media to create unsubstantiated and biased hype. This is not only concerning but incumbent on the NSW to dismiss misinformation spread by private councils.

Conversely, species such as cane toads, carp, Rats, Northern Pacific Sea star, Green Crab, cats as an example, which directly threaten species in NSW have little to no resources directed towards them providing a concerning shift in directing resources to support businesses (farming) rather than protective of native species.

It's of note that: There is also a substantial degree of hypocrisy in culling introduced species such as goats, pigs, deer when each year in NSW, we clear 95,000 Hectares (234,750 acres) annually to farm introduced species or to increase housing for economic benefits.

Directing limited government resources to provide economic protection at the expense of ecological damage is concerning and certainly misguided. I am concerned that the NSW Government has misguidedly focused culling efforts on species with high economic value to communities but with low environmental impacts. There are opportunities to the NSW Government to turn introduced species into an economic benefit in NSW by expanding access to all public land in NSW for hunters. Additionally, repealing laws which prevent overseas visitors from undertaking guided hunting which for an average hunt provides a financial benefit to the farmer roughly \$7,000 per person per three-day hunt. Thereby turning a negative economic impact in terms of management of these animals into a financial windfall to farmers and the rural economies.

Its of Note; That the 2019 Department of Primary industries survey report found that hunters contribute \$1.2 billion dollars to the NSW rural economy each years exceeding that of nearly all agricultural production.

Its also of note that, we are spending tens of millions of dollars managing introduced species, when farming hundreds of millions of introduced species-The hypocrisy of which is not lost upon me.

The priority in supporting farmers is highlighted in the statement below by Minister Moriarty:

“We know that our farmers work hard to fight invasive pests and weeds on their land, so we need to make sure other landowners are doing the same – and that includes government. “The Minns Government has acted quickly to deliver on our election commitment to establish an independent Biosecurity Commissioner because we know how devastating the impacts of weeds and pests can be on our farmers, landowners and regional economy. “Weeds cost our agriculture sector around \$1.8 billion every year in lost productivity and control costs, while pest animals cost our sector \$170 million annually. Escalating this problem to a commissioner level is critical for improving the NSW response. “Introducing this bill is a milestone achievement and demonstrates our commitment to supporting NSW’s producers who continually bear the brunt of biosecurity risks.

This statement highlights the focus on economic benefit for a small (but important) segment of our community at the expense of a more specific focus on the environmental impacts of introduced species including the ever-expanding farming of plants and animals in NSW.

My concern is the focus on protecting farmers is misguided and should not be the priority of the NSW Government. Rather protection of our environment is the priority and farmers can draw upon other resources to manage the economic prosperity of their own businesses.

1. Quantify the current extent and impacts of invasive species on NSW industry, environment, and communities:

Personal opinion and expertise:

I am a large landowner in NSW and in the process of purchasing other large acreages. I have access to several large farms and acreage blocks in NSW and I have been an active hunter in NSW since the age of 17 (now 52). During this time, I have physically and electronically monitored and surveilled large areas of land (Its of note: I have formal qualifications in surveillance). I have a large property, in the north west of NSW, the Local Land Services officers estimated there are high numbers of pigs (he said in the hundreds) on my property. Armed with this assertion, I set out 11 cameras in areas advised would likely have the highest traffic of pigs. Over the 12 months of monitoring, I captured videos/photographs of pigs in this area (although I did regularly encounter introduced cats).

Further, I had two NSW Ecologists on my property with permission to undertake a study for the presence of deer on my property. I advised them deer have never been sighted in the area, and I hadn't ever seen deer on my property, even on the 11 infrared cameras I had (including two within a 50 metre radius of there they found the scat). I was present with them when they identified scat, they took measurements and photographs. Presenting the conclusion that fallow deer were present on my property. Their assessment was they estimated the group size to be 19 deer. They completed a report, I later found on the cameras there was no deer, rather it was a small group of Boar goats from my neighbors property which had escaped onto my property. This type of poor diagnosis is concerning and most certainly gives rise to the dramatically over inflated numbers of introduced species, particularly given the unreliability of personal opinion, coupled with assumptive patterning.

I am not saying that certain species are not present in NSW, because they certainly are, they are in my view substantially overestimated. This is highlighted in a 2023 Senate Inquiry into Brumbies in Kosciuszko National park, where the inquiry where the estimated number of Brumbies in Kosciuszko National Park were "*estimated wild horse population of 18,814 horses, with a 95% confidence interval of 14,501 - 23,535 horses*". The method of assessment used was "international best practice methods for population surveys of large animals from the air". **Its goes without saying that purportedly estimating animal numbers in a heavily wooded forest where visibility from the air through tree cover is significantly limited is unreliable at best and highlights the vulnerability in the estimation process.**

The flaws in estimation are highlighted during a statement by Doctor Claire Galea to the inquiry which stated the following;

"Dr Claire Galea, an independent biostatistician, outlined her concerns over the methodology applied by the Alps and KNP surveys, and argued that there were insufficient clusters of feral horses to enable the methodology to be used."

This is again highlighted by a statement by the *The Snowy Mountains Horse Riders Association* also disputed the survey methodology, and estimated the number of feral horses to be much lower than the survey results had shown:

"The local community with generational knowledge and intimate landscape experience of the park and its horses, strongly dispute these current ridiculous numbers. The local community believe that the true population estimate is currently in 2023 up to 4000 – 5000 horses in the whole of KNP at most!"

I believe that the numbers as estimated by the NSW Government are dramatically over inflated the number of animals especially when coupled. Having spoken to various NSW Government employees about how the numbers of species such as pigs, deer or goats are estimated, the system is best described as a guess based on visual estimation over a given area and scat assessments.

Concerns about estimation of animals by Local Land Services and National Parks.

Whilst I cannot speak specifically about the estimation techniques used by National Parks, I believe the estimation of nonnative animals in NSW is dramatically over inflated.

I have been hunting in State Forests for several years, it is permissible to place infrared game cameras in forest to identify, record and detect the movement of animals. I generally place about 4 cameras per state forest to allow me to focus on a specific area when hunting. The current estimated number of deer in NSW is estimated at 200,000. I believe this number is greatly over inflated, as it is very rare for me to record a deer in public land.

I have spoken to representatives from various departments and been informed that the sources of estimation are:

- Landholders reports
- Harvest returns from Department of Primary Industries hunting reports
- Scat dropping assessments
- Estimations from aerial culling operations

For example, the Newcastle Herald reported that National Parks FFAST teams killed 4600 animals on the 9th July 2018. The animals culled mostly consisted of deer and pigs. Let's break down the statistics of the three week operation:

There was a total of 15 flying days, with an estimated in air flying of 105 hours based on 7 hours of flight and shooting each day. This doesn't account for movement to and from the target areas from the airport or refueling. The total of 4600 animals divided into a flying time of 105 hours gives us an estimated kill rate of 43.8 or rounded up to 44 animals per hour. A extraordinary estimate to say the least or roughly 1 animal shot every 1.3 minutes. Incredible shooting no doubt, but certainly not feasible and if this was an accurate figure, certainly highlights the over estimation and likely unethical practices employed in aerial culling.

[Upper Hunter aerial cull takes out 4600 animals stalking farms | Newcastle Herald | Newcastle, NSW](#)

3. Consider existing programs and how they could better contribute to improved invasive species management outcomes in the future:

Its incumbent on the NSW Government to concentrate on management of those plant and animal species which cause the greatest loss not only in terms of financial impacts but environmental damage. The focus of the government on managing low impact animals such as deer or goats is concerning, when far higher priorities exist in terms of threats to the economy and biodiversity in NSW.

Whilst a significant portion of the resources and tens of millions of dollars have been directed towards the management of deer in NSW on the basis that they pose a threat of disease

transmission to livestock and humans, a report by the CSIRO in August 2023, confirm that the basis for this assumption was and is **incorrect and unfounded**. See link to the CSIRO report here [A review of viral and parasitic infections in wild deer in Australia with relevance to livestock and human health \(csiro.au\)](#)

According to a 2019 report by the NSW Department of Primary Industries, hunting contributes \$1.2 billion dollars to the NSW economy in terms of direct benefit from the revenue generated by tourism. The perception that hunting is about getting the largest trophy is a myth and hunting has evolved to be more about self-sustainable living and not trophy animals. Each deer (species dependent as the size of species differ) taken by hunters provides a significant amount of lean meat-This is the focus of the modern day hunter. NSW has 226,000 hunters in NSW, the average hunter harvests 3 deer annually totally 678,000 animals harvested each year, when compared to the number of deer culled by National Parks and Wildlife totaling 5000 ([Boost to feral animal control removes 40,000 feral animals from NSW national parks | NSW Environment and Heritage](#)) and according to Local Land Services 2021 annual report 2740. This highlights the effectiveness of recreational as a greater form of control in NSW.

Its of note; The Department of Primary industries 2022 annual report on Hunting in State Forests states “Licensed hunters harvested 13,914 pest animals as reported to DPI from NSW State Forests in 2021-22,¹⁶⁷ reducing the impacts of these species on native animals and ecosystems. Of the feral deer harvested, 82% were Fallow deer. Additionally, hunters play an important role in biosecurity” Its important to note that there are only 24,481 Restricted hunting licence holders who are authorized by licence to harvest deer in State Forests in NSW.

The effectiveness of hunting is acknowledged in the 2023 Senate Inquiry into Brumbies in Kosciuszko National park which stated the following as a cause of the purported population increase of horses in the park:

“Until relatively recently, numbers of feral horses have been kept low in the Australian Alps over time, primarily through intervention by stockmen and people capturing horses for meat or hide. Control of feral horse populations by shooting, trapping and ‘brumby running’ and roping was undertaken from time to time.”

Its evident that recreational hunting plays an important role in managing introduced species, and as such should be acknowledged. The limited availability of hunting in terms of access to state forests and national parks should be expanded to allow a resources such as hunters greater access as a cost free alternative to helicopter culling, while financially contributing to one of NSW largest forms of revenue exceeding most for of rural agriculture in NSW ([Hunting shown to contribute more to the economy than the wool industry in NSW - ABC News](#))

I would implore this review to dismiss the **biased opinions or misleading statements** of the so-called private councils and rely on data and facts to make is decision.

I submit that this review should reprioritize the limited resources of the NSW Government on the areas of greatest concern whilst drawing on effective resources such as hunters who are currently quite limited in our opportunities and expand the use of this effective resource in the management of introduced species in NSW.

Kind regards
Tony Gavan