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31st October 2023

Attn:
Invasive Species Review – Project Team
Natural Resources Commission
nrc@nrc.nsw.gov.au

Submission for 'Invasive Species Review' NSW

Please accept this submission for the above-mentioned review with a specific focus on the key review questions numbers 3. and 6. as follows:

- 3. What, if any, are the key barriers to effective management of invasive species?**
- 6. What opportunities do you see to improve the outcomes of invasive species management in the future?**

Overview

The Australian Dingo Foundation recognises that introduced 'invasive species' contribute to the decline and extinction of NSW's threatened species as well as have detrimental impacts on agriculture.

This submission has been prepared for the Project Team to seriously consider the extremely detrimental effects the relentless long-term broadscale killing of dingoes, under the guise of 'wild dog control', has had and continues to have on the explosion of 'invasive species' and the subsequent decline and extinction of an ever-growing list of Australia's wildlife.

The Australian Dingo Foundation asserts that the entire context of killing 'wild dogs' as an 'invasive species' is grossly flawed and counter-productive as its objective is:

1. Primarily the killing of native dingoes.
2. It is not justified, effective or humane in regard to providing livestock protection.
3. It is out of step with current community attitudes, given the increased abhorrence of any activities in which animals are deemed to suffer or be killed unnecessarily, from testing of cosmetics on animals, to greyhound and horse racing, to puppy farms, to live export of animals and intensive inhumane farming practices, to the prolonged and cruel deaths suffered from poisoning.
4. It is out of step with overwhelmingly positive community attitudes towards native dingoes as evidenced by the media hype and nearly 60,000 Instagram followers of 'Wandi' Dingo, the

pure 'Alpine' dingo cub that was dropped by an eagle in 2020 into the backyard of a Wandiligong (Victoria) resident.¹

5. The voice of the First Peoples of Australia has been missing from discussions about dingo management.

3. What, if any, are the key barriers to effective management of invasive species?

'Invasive species', such as introduced herbivores (rabbits, deer, pigs, goats and the like) as well as introduced meso-predators (foxes and cats) have exploded in large part due to historical and ongoing relentless extermination of Australia's native apex land predators, being dingoes. The loss of dingoes as top order predators has had a profound impact on ecological health and biodiversity right across Australia. Stable dingo populations are needed to restore ecosystem health, reduce the numbers and impacts of invasive species.²

Background

The broadscale lethal control of dingo has been relentless since the arrival of Europeans . Dingoes have been extirpated from vast areas of the Australian mainland as the result of the following factors:

1. Dingoes are being misrepresented as 'wild dogs' and hence 'invasive species' / 'pests' and are subject to extreme and widespread lethal control measures in NSW, with broadscale aerial baiting being the most damaging to dingo populations. These actions are performed under the guise of the government and industry funded National Wild Dog Action Plan³ as well as Bushfire Recovery and Threatened Species Recovery funds. Aerial baiting of dingoes is approved at 40 baits per kilometre of transect in NSW that results in a knockdown of dingoes of in excess of 90% with follow up control measures of trapping and shooting to kill off the remainder.⁴



Figure 1: Bushfire Recovery Funds were spent in 2020 on the aerial dropping one million 1080 poisoned baits along 60,000 kms of transect in National Parks across NSW to kill dingoes. Reference: <https://www.bluemountains.org.au/documents/bushfires/wildlife-and-conservation-bushfire-recovery-immediate-response-january-2020-200027.pdf>

¹ https://instagram.com/wandi_dingo

² <https://onlinelibrary.wiley.com/doi/abs/10.1111/mam.12115>

³ <https://wilddogplan.org.au/>

⁴ <https://www.dpi.nsw.gov.au/about-us/media-centre/releases/2020/research-finds-best-bait-rate-for-wild-dogs>

2. The Australian public including Traditional Owners have been successfully brainwashed into believing that invasive / feral / hybrid 'wild dogs' are being killed under the guise of the 'Wild Dog Control' and not native dingoes.⁵
3. The wool and livestock industries are extremely influential and powerful government lobby groups and their influence overwhelmingly takes precedence over conservation and environment interests.
4. The hatred of dingoes is steeped in the misplaced colonial mindset. It is pervasive and generational and the resulting legislation and persecution of dingoes is grossly excessive as a result. However, the attitude of graziers is slowly changing from lethal control to sustainable practices and coexistence with native predators;^{6 7} yet policy and legislation relating to dingo 'management' has not kept pace. The National Wild Dog Action Plan's 'nil tenure' approach to dingo 'management' calls for private and public land managers to work together to ensure complete eradication.⁸
5. It is highly problematic that dingo research is funded and conducted by DPI NSW that is primarily concerned with agricultural productivity. Research funded by the DPI NSW is focused on eradicating dingoes as cheaply and effectively as possible as well as preparing rebuttal papers to refute any research that reports on the positive impacts of dingo protection or calls for dingoes to be classified as anything other than 'wild dogs' or the taxonomic status of *Canis familiaris*.^{9 10 11 12}
6. The voices of Traditional Owners have not been considered or heard, as it pertains to the lethal control of dingoes. A national dingo declaration signed by representatives from more than 20 First Nations groups says:

'We do not, and have never, approved the killing of dingoes. Killing dingoes is killing family. We demand an immediate stop to this 'management' across Australia,' **First Nation's National Dingo Declaration**¹³

7. The miniscule and highly localized livestock predation rate by dingoes is not considered in regard to their 'management' with zero transparency by government agencies into how the 'financial impacts' of 'wild dog predation' is arrived at, as these figures have no relationship to livestock killed or maimed. 'In eight out of the 10 NSW LLS jurisdictions examined, the proportion of sheep and cattle killed by 'wild dog' predation rarely exceeded 1 per cent of the area's flock/herd per year and was often significantly lower than 0.1 per cent.'¹⁴

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<https://www.researchgate.net/publication/342943357> Wicked wild dogs Australian public awareness of and attitudes towards dingoes and dingo management

⁶ <https://www.publish.csiro.au/pc/PC18089>

⁷ <https://landholdersfordingoes.org/>

⁸ <https://pestsmart.org.au/wp-content/uploads/sites/3/2020/06/Hunt2005b.pdf>

⁹ <https://www.publish.csiro.au/wr/WR18188>

¹⁰ <https://research.usg.edu.au/item/q6z49/did-dingo-control-cause-the-elimination-of-kowaris-through-mesopredator-release-effects-a-response-to-wallach-and-o-neill-2009>

¹¹ <https://research.monash.edu/en/publications/taxonomic-status-of-the-australian-dingo-the-case-for-canis-dingo>

¹² <https://www.biotaxa.org/Zootaxa/article/view/zootaxa.4564.1.7>

¹³ <https://www.theguardian.com/environment/2023/sep/18/first-nations-groups-demand-immediate-stop-to-killing-dingos-as-control-method>

¹⁴ <https://www.abc.net.au/news/2022-07-15/wild-dog-control-spending-to-protect-livestock-value-questioned/101189334>

'New South Wales ... where dingo-dog hybridisation is assumed to be pervasive, most animals were found to be pure dingoes, and only two wild canids had less than 70 per cent dingo ancestry.'

'While there has been some hybridisation in the past, it's not occurring at a rapid pace today,' Dr Cairns says. "Where it does happen, we can see the offspring of the hybrids returning to their dingo roots over time.' **Dr Kylie Cairns (Doctor of Philosophy Ph.D, Molecular Genetics, UNSW Australia.)**¹⁵

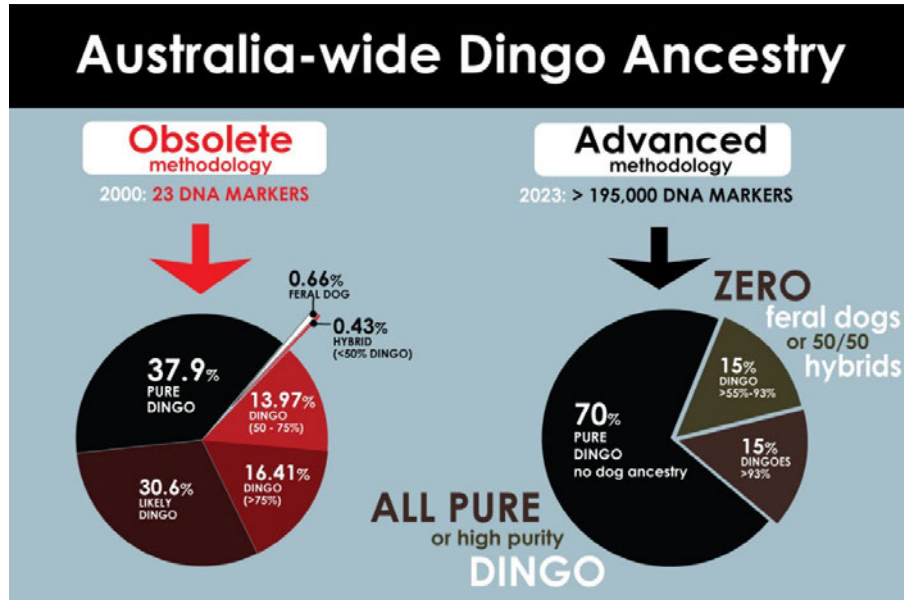


Figure 1: Obsolete DNA testing to 23 markers, grossly overestimated the degree of hybridisation across the Australian mainland. References: <https://onlinelibrary.wiley.com/doi/abs/10.1111/mec.13416> and <https://onlinelibrary.wiley.com/doi/10.1111/mec.16998>

¹⁵ <https://www.unsw.edu.au/news/2023/05/new-dna-testing-technology-shows-majority-of-wild-dingoes-are-pu#>

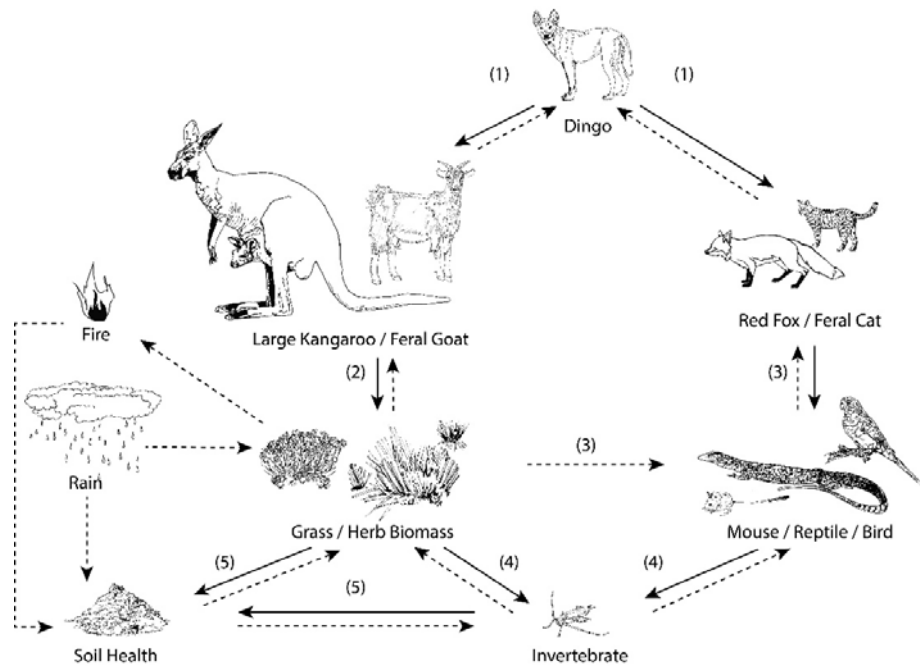


Figure 2: A dingo-induced trophic cascade (solid arrows).

If dingoes suppress large herbivores (e.g. kangaroos and emus), then grass and herb biomass is expected to increase. If dingoes suppress lower order predators (e.g. foxes and cats), then numbers of small mammals (e.g. mice), reptiles (e.g. goannas), and birds (e.g. parrots) are expected to increase. Invertebrates also may respond to improved vegetation conditions and contribute to soil quality. However, the strength of all interactions may be influenced by the extent of rainfall and fires (hashed arrows). Numbers represent the predicted sequence of events based on trophic cascade theory. Reference: <https://thomasnewsome.com/2017/02/>

‘Current management of dingo populations everywhere is driving a vicious cycle of environmental damage and predator control, baiting programs destroy social structures and promote super-abundance, hyper-predation and hybridisation. There is also evidence that predator control increases predation on livestock’ **Adam O’Neill, Eureka Prize winning scientist and author of ‘Living with the Dingo’ (2002).**

1. Research by Cairns, K.M. et al (2023) provides irrefutable proof that wild Canids across the Australian mainland and including in NSW are largely pure or high purity dingoes and hence overwhelmingly it is dingoes that are being killed as a result of ‘wild dog control’.¹⁶
2. Removing dingoes, directly or inadvertently, has coincided with explosions of numbers of invasive and destructive herbivorous species, most notably deer (with recent calls to declare them a ‘pest’ species)¹⁷ and feral pigs¹⁸.
3. Removing dingoes can cause an explosion in the numbers of larger native Australian macropods.¹⁹
4. Removing dingoes directly results in explosions of destructive feral cats.²⁰

¹⁶ <https://onlinelibrary.wiley.com/doi/10.1111/mec.16998>

¹⁷ <https://www.environment.gov.au/biodiversity/invasive-species/publications/factsheet-feral-deer>

¹⁸ <https://agriculture.vic.gov.au/biosecurity/pest-animals/priority-pest-animals/pig-feral-or-wild>

¹⁹ <https://royalsocietypublishing.org/doi/10.1098/rspb.2013.3094>

²⁰ https://www.ari.vic.gov.au/_data/assets/word_doc/0029/354593/ARI-Technical-Report-292-Estimating-population-changes-in-wild-dogs,-feral-cats-and-foxes-in-relation-to-aerial-baiting-east-Victoria.docx

1080 Aerial Baiting



Favours Feral Cats



Figure 3: Research by the Arthur Rylah Institute found that four months after just one 'wild dog' aerial baiting operation dingoes had declined by 27%, foxes had declined by 23% but feral cats had increased by 21%. T

5. Lethal control of dingoes can cause unintended consequences including unchecked breeding of subordinates and increased livestock predation.

Why Killing Dingoes Doesn't Work

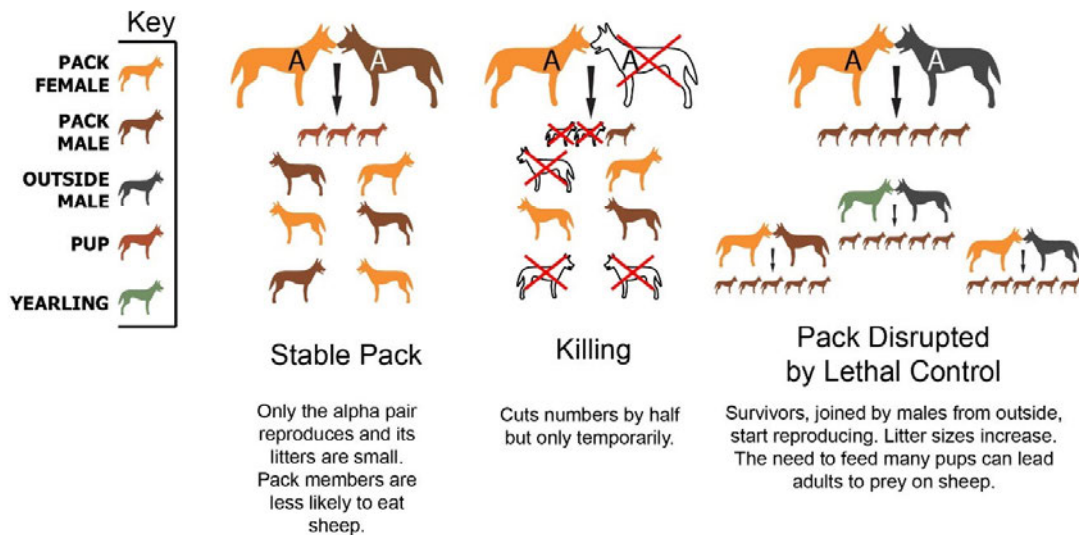


Figure 4: Killing Dingoes can be counter-productive and cause increases in breeding and predation on livestock.

6. What opportunities do you see to improve the outcomes of invasive species management in the future?

The Australian Dingo Foundation are calling for full protection for dingoes on public lands to restore healthy ecological function and naturally suppress the numbers and spread of 'invasive species', both introduced herbivores (feral pigs, deer, rabbits etc) as well as introduced meso-predators (foxes and feral cats).

Background

Dingoes play a keystone role as Australia's only (non-human) native apex land predator providing ecosystem regulation, health and stability.^{21 22 23}

Ecologically, dingoes fill the niche of apex land predator within Australia at the top of the food chain. Dingoes are ecosystem regulators, providing ecological stability and resilience with the entire ecosystem's health hinging on their performance.

Through complex behaviours and social interactions, dingoes also self-regulate their own populations which is essentially unique to top order predators across the world, including lions and wolves.

²¹ <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1461-0248.2010.01492.x>

²² <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-185X.2011.00203.x>

²³ <https://www.science.org/doi/10.1126/science.1205106>

Dingoes prey on and regulate the populations of both introduced and natural herbivores such as kangaroos, rabbits, deer, feral pigs and goats which in turn improves vegetation cover and indirectly gives life to many small-medium mammals, marsupials, native birds, reptiles and other species. Without the suppression effects of Dingoes, herbivore numbers explode, leading to overgrazing, loss of flora, erosion, less drought resistance, resulting in exacerbating issues associated with global warming / climate change.

Dingoes also kill, as well as suppress the hunting behaviours of destructive invasive meso-predators, such as feral cats and foxes, which ensures the survival of many native animals at the bottom of the food chain.

Dingo extermination is also counter-productive for farmers, with explosions in herbivore numbers creating uncontrollable grazing pressure competing with livestock.

In calling for dingo protection there needs to be a cessation of lethal control of dingoes on public land and a review of current livestock protection strategies with an emphasis on research and implementation of non-lethal, coexistence with native predators.

The Opportunities:

1. Transparency is required in how dingoes are 'managed' and the misrepresentation and brainwashing of the Australian public needs to stop. This requires ending the use of the term 'wild dog' to describe dingoes.
2. Replace the current 'Wild Dog Action Plan' with a 'Livestock Protection Plan' or 'Predator Smart Farming Plan' with the objective supporting both the protection of sheep and other livestock as well as dingoes and other native predators, with a shift in emphasis towards investment in non-lethal strategies to protect livestock.
3. Retrain and redeploy Wild Dog Control personnel to support implementing tried and tested effective non-lethal livestock protection strategies and trialing new initiatives with livestock producers to coexist with dingoes, including;
 - a. Electric fencing
 - b. Livestock guardian animals
 - c. Fladry
 - d. Foxlights²⁴
 - e. Changes to animal husbandry etc.
2. Cease all aerial and ground 'wild dog' 1080 baiting and reinvest this budget into non-lethal stock protection.
3. Lethal control such as short-term trapping and shooting on private property should require a permit and in all circumstances be targeted, evidence based, and balanced (and only when non-lethal management strategies have been exhausted) against the need to maintain ecological resilience and conserve dingo populations.
4. The Australian Dingo Foundation is currently researching and developing new initiatives to support compassionate co-existence and are showing great promise but require funding, such as a solar electronically controlled scarer (super fladry) and semio-chemical barriers based on pheromones now isolated and can be distributed around property boundaries via drone. Our recommendation is for government funding to support these emerging non-lethal strategies.

Thank you for considering this submission and please be advised I would welcome the opportunity to address the Project Team in person if the opportunity to do so is available.

²⁴ <https://www.foxlightsaustralia.com.au/>

Yours sincerely,



Australian Dingo Foundation