Submission to Inquiry into Ecosystem Decline in Victoria
Dingo/wild dog policy and the environment

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introduction

This submission provides scientific evidence that cessation of lethal control of dingoes/wild dogs will reduce the decline of Victoria's ecosystems and cost than current measures.

A new sustainable approach to the environmental management of dingoes/wild dogs is required; one that is based on **science** and will.

- Enhance landscape biodiversity
- Enhance the survival of Critical Weight Mammals (CWM)
- Reduce *pest* herbivores
- Enhance stock survival, health, and production,
- Enhance farm manager mental health, and
- All this for less cost to the public purse, and the landowner than the current methods.

Baiting, trapping, and shooting of top order predators (dingoes and their hybrids) must be discontinued and replaced with:

- A farmer education program supporting the use of Livestock Guard Animals (LGA),
- A time limited assistance/support package for farmers for purchase and training of LGA,
- Compensation for stock loss for the first two years only if LGAs are being implemented[1].

The dingo *(Canis dingo)* has been listed as threatened in Victoria under the *Flora and Fauna Guarantee Act* 1998 as they enhance the survival of many small indigenous animals by reducing the impact of the red fox *(Vulpes vulpes)*, and the cat *(felis catus)*; and reduce the impact of herbivores, both natives and introduced, over grazing grasslands. Current methods of lethal control only exacerbate the dingo/wild dog problem as it destroys pack structure leaving juveniles unsupervised to breed and rampage; and it is not working. Wallach *et al* (2017) describe the positive impact on cattle production at *Evelyn Downs Station* in northern South Australia, when lethal control of dingoes is ceased.

[1] Oregon farmers are reimbursed for stock lost to wolf predation (Kennedy 2015a).

About 85% of Australia's flora and fauna are endemic (Chapman 2009), that is, they occur nowhere else in the world. Australia is the only continent where placental, marsupial and monotreme species exist together in their natural state and we have the worst record of mammal extinctions in the world (Johnson 2006). It is time that this crisis of extinction is halted.

Australia's unique environment is priceless given the growing importance of ecotourism, and the number of overseas visitors[2]. In a submission to the Australian Government, Tourism Australia outlined the significance of Ecotourism in 2015/16, as 68% of international visitors to Australia participated in Ecotourism and spent in excess of $40B (Hillman 2017).

Ascertaining the value of our unique environment is an exercise fraught with difficulties; for example, what is the value to tourism of the Great Barrier Reef, and dingoes on Fraser Island? Once it has been destroyed it cannot be returned. The Tasmanian Tiger has been lost forever.

Background

In the past, environmental management has been based on killing and enclosures. Rather than allowing the natural order of the environment to evolve, management has included killing as a tool.

The time has come for environmental management to be based on science, not emotion, history, and politics. During 2020 when the COVID-19 pandemic was a serious threat to our society Government media briefings continually stressed the importance of the science. Media conferences invariably included expert scientific information delivered by the Chief Health Officer or his/her deputy. All decisions were carefully based on medical science, and it has worked. The Government must now manage the environment based on science, not emotion, politics, or history as is the case now.

The continued baiting, trapping, and shooting of top order predators (dingoes (*Canis dingo*) and their hybrids) is not supported by science, is fiscally irresponsible, not sustainable, not making a difference, and damaging the environment.

Research has shown that:

- Continued baiting, trapping and shooting destroys dingo pack structure (Wallach et al. 2009), and increases stock loss (Allen 2014). Lethal control is indiscriminate and when the alpha pair are lost the juveniles lose the knowledge and ability hunt their preferred prey, macrods (Breckwoldt 1988; O'Neil 2015; Wallach et al. 2009). When

[2] In times when the world is not subject to a COVID-19 pandemic.

wolves are not subject to lethal control depredations stay low and even decrease (Kennedy 2015a).

- When lethal control is ceased dingo packs become stable and stock loss is reduced (Allen 2014; O'Neil 2015; Wallach & O'Neil 2014; Wallach et al. 2009).
- Where dingoes/wild dogs have been controlled for many years' macropods such as the western grey kangaroo (*Macropus fuliginosus*) and the eastern grey kangaroo *(Macropus giganteus)* reproduce without control leading to over population and over grazing of grasslands and undergrowth (Langmaid 2015) (Personal observations in the Grampians area). Many small endangered mammals require undergrowth for habitat and protection, so the overgrazing of undergrowth causes increased stress on small mammals.
- Recent research has shown that the introgression of domestic dog genes into dingo populations has minimal effects on functional morphology or ecological role of the dingo. Accordingly, introgression does not diminish the conservation status of the dingo (Crowther et al. 2020)
- The use of Livestock Guard Animals such as maremmas (an Italian guard dog) are effective in guarding stock such as sheep, goats, cattle, penguins[3] and free range poultry in the Australian environment (Dunluce nd; van Bommel 2010; van Bommel & Johnson 2012, 2014)
- The use of Livestock Guardian Animals
    - Increases lambing and calving rates by up to 70%, improves stock health and therefore meat and wool production (van Bommel 2010; van Bommel & Johnson 2012) ,
    - Improves the mental health of farm managers as they are not lying awake at night listening for wild dogs/dingoes (van Bommel 2010; van Bommel & Johnson 2012, 2014).
    - Farmers in Rainbow (Romensky 2015), west of Hughenden in North Queensland(Dunluce nd), south of Tambo in Central Queensland and on the Mitta Mitta River SE of Tallangatta in Victoria report the positive aspects of using maremma dogs to protect sheep (van Bommel 2010).
- There is an ever-growing body of research that shows the benefits of dingoes/hybrids to the ecosystem in reducing the impact of the domestic cat *(felis catus)* and the introduced red fox *(Vulpes vulpes)*. When the impact of foxes and cats are reduced most small, often endangered, critical weight mammals are able to prosper (Dickman, Glen & Letnic 2009; Hayward & Somers 2009; Johnson 2006; Johnson, Isaac & Fisher 2007; Johnson & Vanderwal 2009; Letnic, Ritchie & Dickman 2012; Nimmo et al. 2014; Wallach & O'Neill 2009).
- Both the 'Predation of wildlife by the cat and the introduced red fox' are listed under the FFG Act 1988 as a 'Key threatening process' (DSE 2004, 2012, nd). (A cat can eat up to 25 hopping mice an evening)

[3] The use of Maremmas to protect penguins was the subject of the recent film "Oddball".

- In outback Australia cattle graziers can make up to $0.83/hectare more when dingo populations are healthy (no lethal control). Dingoes reduce the numbers of kangaroos leaving greater biomass for cattle (Bradshaw 2014; von_Hörchner 2015).
- Dingoes have been shown to reduce the number of woody shrubs (weeds) in marginal country. When dingoes are present there are fewer large herbivores, cats and foxes and those that are present exist in an *environment of fear* so hopping mice (*Notomys ssp*) prosper. They have less predators and greater protection in a dense understorey. Hopping mice eat the seeds of woody weeds thus reducing the proliferation of *woody weeds* (Gordon et al. 2017).
- Linda Van Bommel (2010) has already authored *Guardian Dogs. Best Practice Manual for the use of Livestock Guardian Dogs,* a publication that is a ready made road map for the introduction of this policy.
- Lethal control programs, widespread across the country, are largely ineffective, and yet Governments continue to spend millions of dollars every year on such programs because bureaucracies and graziers are simply addicted to killing. It's what has always been done and so that's what will continue to be done – regardless of scientific evidence or the obvious conservation imperative. But there are better ways to protect livestock and conserve dingoes (Kennedy 2015b).
- Allen & West (2013) claim dingo/wild dog predation is increasing in all sheep production zones in Australia and has contributed substantially to the contraction of the sheep industry. They argue that rangeland production of wool and sheep meat will disappear within 30–40 years if the present rate of contraction of the industry continues unabated. Forsyth *et al* (2014) counter argue that the importance of dingoes as a cause of the decline in Australia's sheep flock has been overstated. There has been a similar rate of decline of sheep production in New Zealand, Argentina and the USA attributed to decline in wool price due to competition from other textiles and increasing cost of production. Sheep have been replaced with grain crops and cattle which provide greater financial return for input. Sheep husbandry is expensive in terms of time and labour compared to alternatives.

The positive impact of a top order predator is illustrated by research conducted following the return of the grey wolf (*Canis lupus occidentalis*) to Yellowstone National Park in 1995. Many positive ecological changes have been identified (Morell 2007). These include:

- A decrease in the number of large herbivores, the elk *(Cervis elaphus)* due to predation and fear of predation, a reduction of grazing pressure on riparian vegetation triggering a reduction of stream erosion and a return to a meandering single-thread channel (Beschta & Ripple 2006, 2014).
- Elk numbers have been reduced from 20,000 in the 1990's to < 10,000 in 2004, only nine years after the reintroduction of wolves (Robbins 2004).
- Allowing higher Bison *(Bison bison)* density, a species able to produce substantial change in an ecosystem, such as increased diversity of vegetation (Ripple et al. 2010).

- Prior to return of wolves there was concern that cottonwood trees (*Populus deltoids)* would become extinct in the Park due to elk over grazing of saplings (Beschta & Ripple 2014; Morell 2007).
- Changes in behaviour and distribution of beavers *(Castor canadensis),* coyotes (*Canis latrans*), grizzlies *(Ursus arctos horribilis)*, red foxes *(Vulpes vulpes)*, ravens (*Corvus corax*) and song birds (Robbins 2004).

The theory of *Top order predators* (Hayward & Somers 2009) and *Trophic cascades* (Terborgh & Estes 2010) suggests that the impact of dingoes/wild dogs would not be dissimilar in the Australian environment.

The extent of the problem

- Total number of sheep and lambs in Victoria 2015-16 = 13,064,754
- Sheep taken by wild dog predation 995[4]
- As a percentage 995/13,064,754 by 100/1 = 0.0076%
- Cost of sheep lost $248,000[5]

Farmers keep telling us the problem is worse than ever
Check the Weekly Times, Stock Land and/or Farm Weekly.

From Farm Weekly (12 Mar 2018)
Mr Davidson said despite the efforts of government bodies to bait wild dogs on conservation land he was seeing "heaps of dogs" encroaching on his family farm.

From the ABC on line (not research, just opinion):

> *Dr Lee Allen stated: I have seen wild dogs go into shires where there hadn't been any seen there for half a century, and that has continued decade by decade until now there is nowhere in Queensland that doesn't have wild dogs. And that trend has continued in New South Wales and Victoria and South Australia, so the wild dog problem has expanded over the years and the density of wild dogs has increased in areas as well.* (Lee Allen earns a living from killing dingoes and wild dogs)
> This is how myths are created; when scientists suggest ideas that have not been subject to scientific scrutiny.

A great big industry

- Wild dog destruction is BIG BUSINESS
- Wild dog destruction is BIG POLITICS
- Wild dog destruction is BIG MONEY

[4] I understand these figures come from the Wild Dog Management Committee
[5] Prices of ≈ $250 per sheep June 2020 https://www.farmonline.com.au/story/6684438/coronavirus-checks-rampant-lamb-market-but-prices-still-high/

- Wild dog destruction provides a livelihood for many bureaucrats *et al*
- Invasive animals CRC (now centre for invasive species solutions) is funded by:
    - Invasive Animals Ltd (Government funded **charity**)
    - Meat and Livestock Australia
    - Australian Wool Innovation Ltd
- Invasive Animals CRC funds
    - Animal Control Technologies (Commercial Poisons Company)
    - Pestsmart
    - Scientists who research lethal control
        - Peter Flemming
        - Ben Allen
        - Lee Allen
- Invasive Animals Ltd is listed as a charitable organization that is involved in *Preventing or relieving suffering of animals yet* promotes the use of 1080 *(Sodium fluoroacetate*) a poison that causes a long drawn out painful death.
- There is also evidence that even bureaucrats support the continued *status quo.* In writing the Dingo Action Statement (DEPI 2013) following the listing of the dingo as a threatened species under the *Flora and Fauna Guarantee Act 1988* there is reference to a Journal article that found serious design and/or methodological flaws in some twenty studies (Allen, Engenman & Allen 2011). Yet the writers of the Action Statement completely failed to cite a reply to these concerns in the same edition of the same Journal which refuted the claims of Allen et al (Letnic et al. 2011).

Animal Control Technologies is developing Eradicat and Hisstory, both 1080 based poisons for cats.

- Hisstory trademark is owned by the Federal Department of Environment and Energy
- Eradicat trademark is owned by West Australian Department of Parks and Wildlife.

In reply to farming lobby

- We have listened to the emotive argument of the farming lobby, but have they quoted any peer reviewed science, no, only their own opinion.
- Their own newspaper, the Weekly Times conducted a poll on lethal control in 2014, and surprisingly 37% supported baiting, while 63% were against.
- Farmers have been managing their environment for years, but their aim is a monoculture while environmental conservation advocates a diverse ecosystem.

Benefits of this policy

Benefits of this policy, if implemented will save public money and benefit the environment in several ways including:

- There will be no further costs associated with dingo/wild dog control
- Farmers will increase production
- Farmer mental health will be improved -> less cost

- The devastating effects of cats and foxes on our small native animals will be reduced lessening the need to implement costly cat and fox eradication programs
- Reduction in numbers of kangaroos which recently been blamed for deaths and injury on our roads (Gray 2015).
- Reduction in the number of deer which are now an established pest species.
- Reduction in the number of brumbies (*Equus caballus*) in the High Country

So why won't farmers and bureaucrats adopt new methods?

This policy is good science and like all good science it goes three stages of truth:

- First, it is ridiculed.
- Second, it is violently opposed.
- Third, it is accepted as being self-evident.
  (Arthur Schopenhauer 1818)

Truly revolutionary ideas often arise in direct contravention of accepted wisdom, and hence come under rigorous scrutiny.

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1. This is worthless nonsense,
2. This is an interesting, but perverse, point of view,
3. This is true, but quite unimportant,
4. I always said so.

(Haldane 1962)

The Renaissance physicist Galileo defended *heliocentrism* (where the earth and planets revolve around the sun) which was at odds with the *geocentric* beliefs of the day. The Pope ordered him to abandon his teachings, but he was still bought before the Inquisition, found *vehemently suspect of heresy*, sentenced to prison, later commuted to house arrest where he remained for the rest of his life (1633-1642). Any publication of his works was forbidden by the Church.

Examples of old traditional beliefs that are now discredited

- Smoking can cure cancer and is a treatment for asthma
- Bloodletting is an accepted form of therapy for many conditions including stroke.
- Darwin's theory of evolution
- Australian's will never be good enough to win Le Tour de France
- Man will never walk on the moon
- The earth is flat, sail to close to the edge and you will go over
- The earth is the centre of the universe
- Sacrifice to the Gods will bring good crops
- Farmers do not need to wear helmets while riding motor bikes on the farm

- Women are less intelligent than men and should not be allowed to vote
- Snake bite should be treated with two deep cuts, condy's crystals and a tourniquet
- Man will never fly

I do not know how we change the attitudes, behaviours and actions of our politicians, bureaucrats and farmers, but the science is clear, and it is time to stop spending my money on outdated practices that are not working. I do not like seeing my money wasted on foolish outdated practices.

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