May 25, 2016

Pest Animal Review
Natural Resources Commission
GPO Box 5341
Sydney NSW 2001

“SHARED PROBLEM, SHARED SOLUTIONS – PEST ANIMAL MANAGEMENT REVIEW”

INTRODUCTION

The Australian Deer Association (ADA) and Field & Game Australia (FGA) are Australia’s leading volunteer hunting organisations.

Both organisations are founded on a conservation ethic and advocate for the sensible and sustainable management of wild game animals in Australia.

Hunting is an essential element of sustainable use. It is recognised internationally that conservation models based on hunting are the most sustainable and effective.

We note that the Scope of the Review as outlined in the draft report includes a number of principles which do not appear to have been adhered to in making some of the recommendations in the report, most notably:

- ways to promote community understanding of, and involvement in, pest animal management;
- quality of the evidence base and processes supporting prioritisation decisions; and
- examples of current good practice, including those from other jurisdictions.

In relation to the recommendation to re-classify wild deer as a pest species, we are opposed on the following grounds:

- The draft recommendation is not supported by evidence.
- Experience in other jurisdictions (e.g. Queensland) is that a pest listing does not result in any improved outcomes across any of the stated objectives for the review (‘triple bottom line’).
- A pest listing could place a legal onus on landowners to control deer emanating from adjacent crown land with no support from Government. Deer populations are increasing and game management principles suggest that this will continue over the short to medium term.
- The Sporting Shooters Association of Australia (SSAA) New South Wales (NSW) submission has been relied upon as a justification for the recommendation and as an indication of support from shooters and hunters. There is considerable opposition to this amongst shooters (including within the SSAA) with their support being viewed as an attempt to place their organisation and members at the centre of all wildlife management in NSW.
- The joint SSAA/NRC program is over 600 times more expensive than the demonstrated best practice for the use of recreational hunters for wildlife control on NSW public land. The interim report into the SSAA/NRC

joint supplementary pest control trial (February 2016) reports that the program has removed 2,846 animals at a cost of $3.6 million, or $1,264.93 per animal. By contrast, the last Public Benefit Assessment tabled for the Game Council NSW (June 2013) reported a removal of 1,230,090 animals at a cost of $2.5 million, equating to just $2.08 per animal.

- Arrangements to allow landowners to effectively control wild deer on their land are in place, but are not well understood by the community.
- Declaring an animal a pest opens the door for the even more indiscriminate use of poisons which can inflict unnecessarily painful deaths and kill other species. Australia already is the second largest user of 1080 poison in the world after New Zealand.
- Changing from a G-Licence to R-Licence for game birds is unclear and hasn’t been explained.
- Consideration for the intensive clean-up of our waterways and wetlands will be required if the projected carp kill is achieved from the release of the herpes virus. Based on estimates that is approximately 80% of the current biomass.
- Recognition of the contribution from recreational hunters is significant – delivering not only social and environmental outcomes, also contributing economic benefits, largely to regional communities.
- Fox and wild dog management strategies deliver important benefits, with current evidence superseding studies quoted from the early 2000s.

ADA and FGA argue that decisions which affect our members must be made based on facts and data; we submit that the draft report has fundamentally failed in that regard.

“MANAGEMENT OF DEER IN NSW MUST CHANGE”

The recommendations relating to wild deer are based on a raft of erroneous assumptions and what appears to be an ideological opposition to public land hunting and the sustainable use of wildlife.

It is noted that estimates of abundance are based on modelling from over a decade ago and that no population counts have been undertaken.

The draft report asserts that “there were nine fatalities caused by collisions with deer and around 100 collisions with trains per year causing up to $3 million damage every year”. The source cited for this contention is “Evidence presented at the regional tours for the NSW Natural Resources Commission 2015”. This is not, in fact evidence at all, it is anecdote. Given that the “quality of the evidence base” is ostensibly a key factor in the making of recommendations, we have to question the motivation of the authors of the draft report for including material such as this.

“Management of deer is conflicted” is a catch-cry used by anti-hunting ideologues across south-eastern Australia. The contention behind this claim is that the community, governments, and public service agencies lack the capacity to reconcile multiple priorities for managing wildlife. Where any conflict does exist, it is invariably predicated by a failure on the behalf of Government agencies to properly communicate.

Recreational hunters are the most widely used management option chosen by wildlife authorities to manage wild deer throughout the world. Whilst not appropriate for all situations, the regulation of recreational deer hunting can contribute to achieving specific aims across a variety of habitats and land tenures. The statement in the draft report that “the use of recreational hunting as the primary population control measure for deer is ineffective” is not supported by evidence and is contrary to the dominant experience of land managers worldwide.

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2 NSW Natural Resources Commission, February 2016, Supplementary pest control trial: Interim Evaluation
3 NSW Game Council, June 2013, 2012-13 Public Benefit Assessment: Final Report
In all parts of the world where humans and wild deer both live, a culture of deer hunting also exists. The cryptic nature of deer combined with their excellent predator avoidance adaptations make them more difficult to hunt than many other species. The challenge of hunting deer attracts millions of individuals in many countries to spend their time and money to hunt when they don’t actually need to. Although wild-harvested venison is usually gathered from these hunts, they are not subsistence hunters. Venison is a by-product of the hunt; the challenge is the principal driver.

The hunting of wild deer by humans for personal use has become a multi-million dollar activity throughout the world. Due to the significant challenges an individual will face, according to the principles of “fair chase”, hunting wild deer is an increasingly popular pastime.

In Europe the culture of hunting deer for recreational reasons dates back centuries. Traditionally, access to hunting rights was limited to a select few based on social class. Although less obvious today, access to the right to hunt is still prescribed through the revier system. In the United States, recreational hunting is deeply intertwined with wildlife management and conservation. Access for all citizens is one of the cornerstones of this management paradigm along with regulation by the state and research through academia. Recreational deer hunters are the principal tool used by wildlife managers across North America to address issues associated with wild deer.

There are approximately 300,000 recreational hunters in Australia. Of this number, a considerable proportion will hunt wild deer at some time. In Victoria, Game Licence holders endorsed to harvest deer ranged between 23,830 and 27,349 in 2014 (depending on time of year). The total harvest accredited to these licence holders is believed to be around 57,945 wild deer. The estimated annual harvest of wild deer in Victoria has increased each year over the last five years. In Tasmania there are around 4500 licensed deer hunters with this number steadily increasing over the last five years. In other states like Queensland where deer are classified pests, it is not possible to quantify the number of deer hunters accurately, nor the number of deer harvested.

The draft report erroneously asserts that (in Tasmania, Victoria and NSW) “deer are protected by legislation such as annual or restricted open seasons that comply with fair chase definitions (Jesser, 2004). In other states and territories, there is a more balanced approach, permitting recreational hunting while focused on controlling deer as a pest species.” The premise of this statement fundamentally misunderstands or misinterprets the reality of the deer management regimes in the jurisdictions mentioned and relies on what would seem to be a superficial appraisal of the management realities.

In Tasmania, wild fallow deer are managed under a property-based game management program which aims to ensure sustainability and balance and deliver mutually beneficial outcomes for the environment, land managers and hunters. Private land managers have a simple process available to enable additional harvest as conditions dictate.

In NSW wild deer are managed along similar lines with the ground breaking Ecological Deer Management (EDM) system still in its fledgling stages. EDM is a management strategy for wild deer herds that is tailored to the needs of landholders and land managers. Deer harvest levels are set based on the number of deer in the local herd and the level of impact on the local environment, agriculture and community. As in Tasmania, private land managers have a simple process available to enable additional harvest as conditions dictate.

In Victoria all deer species other than hog deer are subject to a year-round open season with no bag limit. The only constraints on public land relate to access, tenure, safety and animal welfare. Wild deer other than hog deer are declared unprotected on private land under a Governor in Council order. It is difficult to reconcile these facts with the assertion in the draft report that “deer are protected by legislation”.

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8 Moloney P and Turnbull J, 2015, Estimates for harvest of deer, duck and quail in Victoria, Game Management Authority.
12 Wildlife (Game) Regulations 2012
13 Game Management Authority, 2014, Control of deer on private property Fact Sheet.
The comparative table in 6.5 of the draft report fails to mention the Victorian Governor in Council order making deer unprotected on private land under either “legislation” or “policy”. Given that Victoria is the state which holds the most wild deer and has the most developed system of public land hunting, this omission renders the table misleading and consequently useless as a tool to aid knowledge or decision making.

The draft report outlines perceived impediments for managing wild deer on private land. It does not, however, contemplate simple administrative solutions to overcome these impediments and improve the system.

The draft report states that if the NSW Government were to declare wild deer as a pest it would enable Local Land Services to place “a responsibility for all landholders to control pests on their property”. This notion of placing an onus on primary producers to manage wildlife populations which often move on and off their properties from adjacent or nearby Crown land runs contrary to the principles recently championed by the NSW Government to repeal the Native Vegetation Act and create laws that “both protect the environment and give farmers a fair go”14.

The draft report lists a number of “constraints” on deer harvest and asserts that “these restrictions unnecessarily curtail the effectiveness of ground shooting as they seek to remove any unfair advantage a hunter may have”. This statement invites the reader to draw the conclusion that a change in status for wild deer would remove these restrictions. In doing so it fails to contemplate practical benefits of the “constraints listed”; notably:

- **Hunting during daylight hours only.** Whilst spotlighting is a proven effective control measure, it is also inherently less safe than normal ground shooting owing to the fact that it removes the shooter’s ability to properly assess a safe shooting backdrop. For this reason most jurisdictions around the world limit spotlight control operations to private land and tightly-controlled operations on public land where roads can be closed off and the absence of other humans in the firing zone can be assured.

- **Restricting hunting during breeding seasons due to an increased likelihood of animal welfare concerns.** The notion that a society’s obligations to welfare of a wild animal under its control varies based on the nomenclature applied to it by legislators is, self evidently, absurd.

- **Aircraft, watercraft or motor vehicles are not permitted.** Prohibitions on shooting from moving vehicles are based on human safety and animal welfare grounds and logically should not change based on the legal status of the quarry.

- **Scent-trailing hounds are not permitted.** The only jurisdiction in Australia where scent-trailing hounds are permitted to be used to hunt wild deer is in Victoria, and they are only permitted for use on Sambar deer. Sambar deer are peculiar in lending themselves to hunting with hounds due to their origin as a prey species for dholes in sub-continental Asia15 and their propensity to excrete a consistent scent through their hind legs. Hound hunting requires a large topographical area and is typically conducted on public land (State Forest etc.). The deer species and the topography of NSW do not lend themselves well to hound hunting on any notable scale.

Whilst the proffered rationale for the recommendation focuses heavily on the purported inadequacies of recreational hunting, it fails to consider the activity in the context of the alternatives available and the practical barriers to their use.

The accepted alternatives to recreational harvest worldwide are predators, professional culling, and commercial harvesting.

**PREDATORS**

Throughout most habitats where deer are native they have coevolved with predators. These include wolves, tigers, mountain lions, wild dogs and even komodo dragons. Since the expansion of human populations, particularly


following the industrial revolution, large predators have not fared well in most habitats. On island nations such as the
UK, all large predators capable of taking deer have been exterminated. A similar pattern of predator persecution has
occurred throughout most of Europe and the United States. Whilst the complete extermination of predators was
considered desirable by most people during the 1800s, the loss of deer species through overharvesting was not. By
1900 laws existed throughout most of the world protecting deer from complete extermination. This protection of deer
was extended to jurisdictions where deer were introduced. In the century since, deer populations have expanded and
grown in most of their original ranges and many new ones. Predators are now being deliberately reintroduced into
many of these habitats with the intention of controlling deer numbers. The best known example of this is in
Yellowstone National Park16. Whilst the encouragement of large predators in areas where humans live is
controversial, there is no question they can have a significant effect on wild deer populations.

PROFESSIONAL CULLING

Culling is the removal or slaughter of animals where the principal objective is the reduction in overall numbers or
certain individuals. Whilst the culled animals might be utilised, this is a by-product of the actual cull. When the
purpose of taking an animal is its use then the act is a harvest as opposed to a cull. Professional culling has been used
to control wild deer in many countries throughout the world. In the UK, Europe and North America professionals are
often employed in localised areas to remove a certain number of animals. These are often relatively small areas where
the desired outcomes can be achieved in a short period of time. Situations where professionals are employed can
include forestry plantations, water reserves, military bases or other fenced areas. These control activities occur
regularly in Australia for kangaroo populations and have also targeted deer in recent years (Sambar deer in Victorian
water reserves).

Professional culling can also take place over larger areas and longer time periods. Government deer cullers were
employed in New Zealand from the 1920s onwards. Hundreds of men were sent into the field on foot armed with ex-
military rifles to shoot as many deer as they could right up to the 1960s. Millions of deer were culled over that period,
but very few were utilised17. Today, government culling programs are more likely to utilise professionals shooting
from a helicopter. Helicopter culling has a long history in Australia for controlling pigs, horses, donkeys, camels and
wild cattle. In recent years wild deer have been culled in Queensland and South Australia using helicopters. Helicopter
culling is expensive but effective at reducing high densities in a short period of time over a small area. The practice of
aerial culling can be very controversial and has been banned in NSW for wild horse control.

COMMERCIAL HARVESTING

Commercial harvesting is the taking of animals with the intention being to sell the animal (or part of the animal) for
profit. Wild deer have been harvested commercially for their meat for centuries. Supply of venison to feed a growing
population in North America effectively exterminated many herds of wild deer in the late 1800s. The individuals
involved in the harvest hunted on foot with rifles considered primitive by today’s standards. Despite difficult terrain
and rudimentary equipment the incentive to make money reduced or exterminated deer from all habitats close to
human settlement. This overharvesting of wildlife is credited as the impetus for the current wildlife management
paradigm in North America. Harvesting for commercial gain has been illegal for over a century on this continent.

In New Zealand, commercial harvesting of wild deer occurred parallel to government culling ever since the protection
of wild deer was removed. Individuals hunted wild deer for their skins in much the same way government cullers
operated. Although unregulated, records kept of commercial skin sales show that the actual take of wild deer from
commercial hunters exceeded that of government culling18. During the 1960s the commercial harvesting of wild deer
with the aid of helicopters significantly reduced populations throughout much of the country. This industry was so
successful in reducing numbers that the decades-old practice of culling of wild deer by government ground shooters

pp 49-59.
18 ibid.
ended. Commercial harvesting of wild deer still occurs in New Zealand; however, the profits are now limited due to the reduced demand for venison and the high costs of operating helicopters.

Wild deer are currently harvested commercially in Queensland. This is a small industry driven by a limited demand. Deer are harvested by licensed game harvesters usually in the pursuit of macropods. Due to Australian regulations relating to safe food production animals can only be harvested where vehicle access is relatively easy. This limits the potential for commercial harvesting to areas of open forest with good vehicle access.

**“BIOCONTROL FOR CARP”**

The Federal Government’s announcement of $15 million funding in the 2016-2017 Federal Budget for the National Carp Control Plan demonstrates recognition of the nature of this pest and the scale of its impact. Interventions to reduce and remove carp from waterways and wetlands is supported. It is important to highlight; however, this is considered only one part of the overarching strategy necessary to restore waterways and wetlands. This tactic should form part of a cohesive approach to waterways and wetland rehabilitation, vital for healthy and clean water for our communities.

It raises three areas of question:

**Will biological control for carp will be effective in the long term?**

- The release of the virus can only be one of the initial steps, including community engagement and education.
- Release of biological control must be supplemented with other forms of management in a “blitz” to optimise the reduction in numbers. That is expected to challenge other programs if not adequately coordinated, and will require access to funding.
- The use of biological controls to manage introduced species follows a consistent and unfortunate trend, with carp becoming a major pest in the 1960s following the accidental release of a strain adapted for fish farming, and established throughout the entire Murray-Darling Basin within a few short years.
- History with biological management of rabbits since the 1950s appears to demonstrate nature’s ability to develop immunity to biological controls released – as a result today we’re having to develop or release new strains for release. It seems that the virus has an effect when first introduced to rabbit populations, but they appear to develop an immunity relatively quickly (possibly due to short breeding-maturity cycles and lifespan, increasing the number of generations exposed to the virus).
- The effect of climate and habitat will influence or interfere with the herpes virus release and effectiveness. Academic research into the distribution and prevalence of the calicivirus and correlation with rainfall and temperature indicates that coastal, temperate areas show increased resistance in rabbit populations.

**Has the scale of the initial clean up following release of the virus, and ongoing clean up, been adequately assessed and has access to funding?**

- Large scale mortality of carp from natural drying cycles in wetlands highlights the need for a dedicated approach to removal of the resultant mass of dead carp.
- Carp are reported as accumulating 90% of the biomass in our waterways, and the proposed release of the relevant herpes virus is targeted at killing 90% of the carp population. By any measure, this is an enormous quantity of dead carp to be managed, and ideally removed from our waterways.
- The logistics of removing dead carp will be challenging by nature of our waterways and wetlands, FGA has experience with this – case study, removal of 20 tonnes of carp from the Heart Morass (the WET Trust property near Sale in Gippsland, Victoria).

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Will there be an impact on other species?

- One of the proposed mitigants to cleaning up carcasses after the initial release is providing a food source to birdlife. This immediately moves the virus through the ecosystem.
- Further information is also sought on the impact of the virus on introduced recreational fish such as the brown trout and other species, and to other wildlife.

"RECREATIONAL HUNTING AS A MANAGEMENT TOOL"

The recognition of recreational hunters and their representative groups in regional pest animal management is supported. Groups such as ADA and FGA bring a national perspective, as well as deep knowledge of specific species.

The opening statement appears to be contradictory, and omits the contribution from recreational hunters. The sentence “Recreational hunting is a valid and valued recreational pursuit and is widely used to hunt several pest species (particularly foxes, dogs and pigs)” excludes the contribution to native game bird management. This may be on the basis that waterfowl has been classified as a game species, not a pest. The sentence “…population control is not the primary purpose of most recreational hunters” again appears at odds with the primary purpose of the Native Gamebird Management Program, where the objective of recreational hunters is to assist farmers with crop protection through the reduction of waterfowl numbers by shooting.

The issue of animal welfare raised by RSPCA is questioned. It’s agreed that shooting is more humane than poisoning. It raises the question why the draft report includes what, in the absence of evidence or data, can only be assumed as the ideological position of one organisation against recreational hunting. Recreational hunters have contributed enormously to reduction in pests, for example in Victoria since 2011, hunters have taken over 400,000 fox scalps for the fox bounty. It’s reported that each fox eats on average 27 birds each year — presumably native. Therefore, it can be assumed the fox scalps taken by recreational hunters have improved the mortality rate by almost 11 million birds.

The reference in Box 7.9 to bounty systems fails to provide evidence on the effective impact and the “…number of serious drawbacks…”. The studies quoted are dated 2002 and 2003. The Victorian fox bounty program has run since 2011, and was recently extended. In addition to the financial return to incentivise and motivate recreational hunters, the bounty provides a reporting mechanism and allows tracking of hunter effort, which, when used in conjunction with other evidence and data, allows us to estimate the impact of recreational hunters on protection of native species, as mentioned in the previous paragraph.

The economic benefits from hunting are documented, with Victoria receiving $439 million in 2013. The return from pest animal hunting is significant ($135 million) and duplicates that from deer hunting ($138 million.) This demonstrates the contribution recreational hunters provide in social, environmental and clear economic benefits.

Wild dog management programs have similarly been extended by the Victorian State Government, with funding for additional baiting announced in the 2016/17 Victorian State Budget. There are calls to reintroduce the wild dog bounty in Victoria, currently managed with poisoning and other measures.

The wild dog bounty in Victoria has been discontinued, but success is anecdotally supported as the $100 bounty was an adequate incentive for deer hunters to effectively ‘give up the chase’ while hunting deer if they were to come across wild dogs mid-hunt.

The challenges of managing wild dogs has been highlighted in the recent article where the exclusion provided for wild dogs in ‘Schedule Two’ lands prevents effective control. Properties adjoining these conservation sites are

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21 Invasive Animals Cooperative Research Centre, 2009, The economic impacts of vertebrate pests in Australia.
reported to bear the brunt of wild dogs moving between farm land and the conservation zones where they are afforded practical protection along with the dingoes that Schedule Two land is designed for.

Reductions in red tape surrounding recreational hunting on private land (Recommendation 23 (I)(ii) is supported in principle. There are two matters raised with this recommendation: the ability to broker alignment of landowners with hunters, and the licensing of hunters, in particular the proposed change to licensing for hunting ducks.

### ABILITY TO BROKER ALIGNMENT OF LAND OWNERS WITH HUNTERS

Landowners registering with DPI for hunters to assist with rice crop duck mitigation highlighted the benefits from this approach. Changes in recent years where this was shelved reinforced the benefits of government agencies coordinating the Native Gamebird Management program. This provided farmers with an important just-in-time service to seek hunters to assist with management of native waterfowl that eat out rice bays overnight, requiring costly re-seeding.

### LICENSING OF HUNTERS

It’s not clear what the recommendation seeks to achieve – reduce administrative burden, or the costs incurred by hunters.

There is an important historical context, with licence fees generating a revenue source for government to fund important hunting and/or conservation activities.

Licensing also provides government with the ability to develop an important resource: a database of contacts that can allow for the ability to communicate with a group with common or shared interests. That resource can also gather feedback and information for research.

The draft pest animal management review is silent on ducks – yet in the draft report recommendations it’s stated that “recreational hunters of game birds will require a restricted licence, rather than the current general licence.”

It seems at odds that game birds, shot only on private land in NSW and therefore within the parameters for the G-Licence, should move to an R-Licence. Yet the proposed change in status for wild deer would bring with it removal of the requirement for “a general licence to target deer on private land, reducing cost and red tape”.

The R-Licence permits hunting on public land: unless allowing hunters access to hunt game birds, including ducks, on public land is intended, it’s unclear what is proposed. The lack of context or background on this proposed change is again highlighted, making it difficult to add value or comment.

### CLOSING REMARKS

Both the Australian Deer Association and Field & Game Australia encourage the engagement of recreational hunters in the management and mitigation of pest animals in NSW and across Australia, but as with any sound management, it needs to have demonstrated evidence and a basis in fact.

We would welcome the opportunity to discuss our submission, and the management of pest animals in NSW, further.
REFERENCES:


Game Management Authority, 2014, Control of deer on private property Fact Sheet

Invasive Animals Cooperative Research Centre, 2009, The economic impacts of vertebrate pests in Australia


Moloney P and Turnbull J, 2015, Estimates for harvest of deer, duck and quail in Victoria, Game Management Authority


NSW Department of Primary Industries, May 2015, Biosecurity Act 2015, Discussion Paper: Deer


Wildlife (Game) Regulations 2012