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Submission to the inquiry into the hunting of native birds

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Duck shooting is and always will be cruel

This submission will show that

- duck shooting is by its very nature cruel
- duck shooters are seriously out of step with community expectations
- the shooters' wounding reduction action plan will still produce a level of wounding unacceptable to the public.

The only acceptable solution is to ban recreational duck shooting.

1. The problem: shotguns inevitably wound animals

Shotguns do not fire a bullet, but a large cluster of pellets. For example, the commonly used #4 steel cartridge contains over 200 pellets. These pellets disperse in a random pattern as they are fired from the gun, spreading out further with increasing distance.

The circles below are 30 inches (76.2cm) in diameter, and show how pellets have dispersed at a distance of 40 yards (36.6m). The circles show the area of a duck for comparison.



Features of these patterns include the fact that:

1. Every shot is different. The pattern of pellets is unpredictable because it is random.
2. Within each pattern there are some gaps and some dense clusters of pellets. If a duck happens to be positioned in a gap, it may be missed or only wounded, but if it is positioned in a dense cluster it will probably be dead.
3. There are a few pellets a long way from the centre of the cluster. These can wound birds with a single pellet, which is unlikely to bring them down.

2. Is there any way to avoid wounding?

A terrible experiment conducted by gun maker, Winchester, in the early 70s demonstrates that there is no way to avoid wounding with a shotgun (1). This was an experiment with absolutely no human error during shooting. Ducks were suspended from hooks on a trolley by thin straps around the wings, so that they could still flap their wings. The trolley moved at a constant speed in a straight line (unlike flying ducks). A shotgun was mounted at set distances from the trolley, and was triggered automatically when the bird was in position (no aim error).

Ducks were checked for signs of life 5 minutes after being shot.

- If they were still alive, they were attached to a cord by one leg and thrown into the air to see if they were coordinated or not.
- They were then placed in an aviary for 10 days with food.
- Those still alive after 10 days were then again thrown into the air to test their ability to fly.

Range	Dead 5 mins	Dead 10 days	Fail flying test	Pass flying test
30 yards 27.5m	91	6	1	2
40 yards 36.6m	69	26	3	2
50 yards 45.7m	32	27	14	27
60 yards 56.5m	10	23	25	42
70 yards 64m	4	9	29	58
80 yards 73.1m	1	3	10	86

Kozicky & Madson (1973), #4 steel shot, 100 mallards at each distance

Notice that even at short range (27.5m), 9% of ducks were not killed instantly, and at medium range (36.6m), this figure rose to 31%. These results were recorded with perfect aim and timing, which would be rare in the field.

Australian Democrat, Mike Elliott MLC, summed up the glaringly obvious conclusion in his address to parliament in support of a bill to ban duck shooting in 1998 (2):

"The issue is about animal cruelty, and no matter how hard a person with a shotgun tries, unless it is point blank, they cannot guarantee a kill in the way that a good rifleman might be able to give a guarantee when hunting larger animals."

3. What happens to wounded ducks?

Some ducks are killed instantly, but some are wounded. The wounded fall into 3 categories, and all categories involve some level of pain and suffering.

1. Duck falls from the sky, is picked up by shooter/dog and killed (bagged).
2. Duck falls (or glides) from the sky and escapes (crippled).
3. Duck flies on with shot in its body (flying wounded).

The most common reason for a bird to be downed is a broken wing. The survival of such crippled ducks was tested in another horrible experiment by either breaking one wing bone under anaesthetic or immobilising one wing with a small strap (3). The mallards were fitted with a radio tracker and released either into a marsh or a pen with food and water.

	Pen	Marsh	
		Broken wing	Immobilised wing
Died	5%	94%	90%
Regained flight	23%	3%	

The ducks released into the marsh suffered severe weight loss, which pen birds did not, so starvation was a major cause of death.

In another study, healthy mallards and wood ducks were fitted with a radio tracker. Their fate was investigated when inactivity or unusual activity was recorded (4). Of the birds not retrieved by hunters, 31% were dead, presumed killed instantly. As to the remainder:

- 31% were killed by predators
- 19% were killed by another shooter later in the season, with these birds emaciated and in poor condition
- 19% survived

It is the extended suffering of crippled ducks that has led the Australian Veterinary Association to call for an end to recreational duck shooting¹:

“AVA President, Dr Bronwyn Orr, said the practice is inhumane and results in many animals being critically injured and left to die in the wild.

‘As veterinarians, our goal is to protect the health and welfare of animals,’ Dr Orr said.

‘Hunting ducks with shotguns often results in non-fatal injuries, where the birds are hit with the outer cluster of pellets, but not retrieved. This results in an ethical animal-welfare problem, as the bird may live for a number of weeks with a crippling injury, receiving no veterinary treatment.’”

¹ <https://www.ava.com.au/policy-advocacy/policies/hunting-and-fishing/waterfowl-hunting/>

4. How many ducks are crippled by shooters?

Many studies use hunter reports, which may or may not be accurate. A study across different environments in 3 Canadian provinces used both hunter reports and evidence from hidden observers (5). Only birds shot within range (40 yards) were recorded, so this crippling rate does not include out of range shooting. For ducks across the different environments:

- the hidden observers recorded 32-45% hit but not retrieved
- hunters reported 12-18% hit but not retrieved.

Hunters may be dishonest, but also could be genuinely unaware of wounded ducks who glide some distance before landing. However, some researchers accept hunter surveys without question, for example, a study from Fisheries and Wildlife in Victoria (6). The table shows the estimated average number of black ducks, chestnut teal and grey teal bagged and crippled per hunter, based on hunter surveys.

Year	Average ducks bagged	Average ducks crippled	Crippling rate
1972	1.71	0.58	25%
1973	1.08	0.18	14%
1974	2.06	0.50	20%
1975	6.62	0.95	13%
1976	1.95	0.53	21%
1977	4.32	0.86	17%

Note that the crippling rate is very variable across the years, and possibly due to reporting errors rather than actual differences in the field. However, even though the reports may be an underestimate, they show that for every 100 ducks downed, between 13 and 25 escape wounded.

Other more recent studies are aware of this problem. Surveys of hunters between 1991 and 2017 in Illinois showed a crippling rate of 15%, that is, 15% of the ducks downed and still alive were not retrieved (7). However, the authors state:

“... it should be noted that this represents only a portion of the true crippling losses as an additional proportion of birds will be hit without the hunter knowing and either recover or subsequently succumb to their wounds.”

The same authors analysed data from one year in Illinois (8). In this survey, 73% of hunters claimed they did not cripple a single duck, which is inconsistent with observations. The authors therefore analysed the data with zero-inflation mixture models, which involve a mathematical adjustment for false zeros. They estimated a cripple rate of 22%, which is consistent with the cripple rate of 20% accepted by the US Fish and Wildlife Service. So, for every 100 ducks hit and downed, 20 escape wounded, most likely to die a slow death.

In relation to these findings in 2022, the authors comment:

“While it is encouraging that we estimated similar crippling losses to previous estimates, it is perhaps concerning that crippling rates appear to have remained approximately static for decades, despite advances in hunting technology such as developments in cartridge technology and improvements in waterfowl calls and decoys.”

5. Does shorter range reduce crippling?

Ducks are less likely to be wounded when they are closer to the shooter. This has led to recommendations for “humane” hunting, as introduced in Denmark and recommended by the Game Management Authority (GMA) in Victoria. **One key element is to only shoot at ducks within a 30m range.**

Here are some observations of shooting at different distances.

Study 1: Michigan, observers measure distances and recorded birds hit (9)

	10-30 yards (to 27.5m)	30-45 yards (to 41.5m)	45 yards + (41.5m+)
Number unretrieved	18	17	7
% unretrieved	14%	15%	23%

Study 2: Louisiana, observers measure distances and recorded birds hit (10)

	Bagged	Crippled	Total hit	% Crippled
≤ 32m	728	269	997	27%
> 32m	258	167	425	39%

Clearly, shooting at a range of around 30 metres does reduce the crippling rate compared to shooting at greater distances. However, cripple rates of 14% (study 1) or 27% (study 2) are not acceptable and in no way can be called “humane”.

6. Do modern decoys reduce crippling?

There are claims that battery-powered spinning-wing decoys (SWDs) will attract ducks closer to the shooter and therefore will reduce crippling rates. SWDs are intended to look like ducks landing. One study, using hunter reports over 5 years, found that more ducks were killed with SWDs and more ducks were also crippled, with the crippling rate similar with and without SWDs (11).

A carefully controlled experiment also found no reduction in crippling rate due to SWDs (12). Decoys and hides were set up by the experimenters, the same shooters shot alternately with and without SWDs, and results were recorded by observers. Ducks did

approach closer to the shooter with SWDs and more ducks were killed, but the crippling rate (ducks visibly hit but not retrieved) was the same (33%) both with and without SWDs.

Another similar controlled experiment in Canadian marshes did find a difference (13). Again, ducks approached closer to the shooter with the SWD on, and more ducks were killed with it on. In contrast to previous studies, with the SWD turned on, 18% of ducks visibly hit were not retrieved, compared to 28% when the SWD was turned off.

So, it is uncertain that modern decoys make a difference to crippling rates, but if they do, is an 18% crippling rate really acceptable? This means that for every 100 ducks visibly hit (downed or with flight impairment), 18 escape wounded.

7. Ducks who survive – the flying wounded

As explained previously, some ducks are hit but fly on, the so-called flying wounded. The shooter may not even be aware that the duck has been injured. These are the birds that will appear in studies where apparently healthy ducks are caught and X-rayed, assuming they survive their injuries. It is another indication of the extent of wounding caused by shotguns, which is in addition to the crippling previously described (most cripples die).

In Victoria, ducks were caught and X-rayed over a 17 year period (14). Here are the percentage of different species containing shotgun pellets from previous shooting seasons:

Chestnut teal	6.2%
Grey teal	9.0%
Hardhead	11.1%
Wood duck	13.6%
Black duck	13.7%
Mountain duck	19.0%

The larger the duck, the more likely it is to be able to survive with pellets in its body. Ducks did not contain only one pellet, but in a few cases up to 13. In these cases, they had accumulated pellets over more than one shooting season.

	% 1 pell	% 2 pell	% 3 pell	% 4 pell	% 5 pell	% +5	Max no
Black duck	60.6	20.7	8.6	4.3	2.6	3.7	13
Chestnut teal	73.8	15.9	6.1	2.6	1.5	0	5
Grey teal	77.5	15.8	4.4	1.2	0.3	0.4	13

Other X-ray studies of ducks showing how many contain embedded pellets:

(15)	Ruddy ducks (small)	5.4%
(16)	Canvasback ducks (medium)	Adults 25-27%, Juveniles 8-17%
(17)	Black-bellied whistling ducks (medium)	19.2%
(18)	Mallard (medium) Black duck (medium) Common eider (large)	11% 15% 29%
(19)	Common eider ducks (large)	22%

In 1997, around 35% of common eider ducks in Denmark contained pellets (20). An action plan was introduced, including shooting only at distances under 30m to reduce the wounding rate. In 2009-2011, 22% of males and an estimated 15-20% of females contained pellets. While this is certainly a reduction, it is still an unacceptable rate of wounding.

8. Is “humane” duck shooting possible?

The pro-hunting lobby wants to argue that duck shooting can be “humane”. For example, Vice-President of CHASA, Rob West, said in an ABC interview²:

"Look, sure — we're not disputing the fact that we do get wounding when we hunt ducks with a shotgun," he said.

"However, we know that with good training, practice and a number of other things that we can significantly reduce the amount of wounding that we have, and once you've got a wounded bird it's how effective you are at disposing of or dispatching it.

They're the key things – there's definitely not an issue there at all."

At least Rob West admits there is wounding, but there are major problems with this statement.

- He refers only to wounded ducks found and killed by the shooter, not the unretrieved cripples who will die slowly, or the flying wounded.
- He trivialises the suffering of wounded birds – in his words, there's definitely not an issue there at all. The recommended methods for killing injured ducks are a second shot or a blow to the back of the skull with a heavy object³. Hunters are obliged to have the necessary equipment to kill injured birds. In our observations over many years, shooters are incompetent at humanely killing ducks. The preferred method is the non-recommended windmill technique where the injured duck is swung around by the head, and subsequently is often not dead because the neck has not been

² Footage of South Australian hunters apparently being slow to kill ducks released ahead of ban inquiry. ABC South East SA, <https://amp.abc.net.au/article/102130602>

³ https://cdn.environment.sa.gov.au/environment/docs/cop_humanedestructionbirds.pdf

broken. This IS an issue, regardless of what Rob West says – the duck has suffered considerable pain and stress, and the sight of shooters windmilling injured ducks is not something the public accepts.

The Game Management Authority in Victoria has wounding reduction guidelines on its website⁴. Recommendations include:

- **Don't shoot beyond 30 metres.** Evidence presented in section 5 shows that shooting at this range does reduce wounding, but not to any extent that is acceptable to the public.
- **Make effective use of decoys.** Evidence presented in section 6 shows that use of the most up-to-date decoys, while effective in attracting ducks, does not generally reduce crippling.
- **Have an effective retrieval strategy.** Recommendations include not shooting over vegetated areas where injured ducks could hide, and using a retriever dog. Even if shooting over open water, some wounded ducks, referred to as gliders or sailers, will be difficult to retrieve. These are ducks that do not fall from the sky when shot, but stop flapping and glide a considerable distance from the shooter. In one study, 10% of ducks wounded even at close range (10-30 yards) were gliders, and 69% of these were not retrieved (9). While dogs do increase the number of ducks retrieved, they also add to the stress and pain of the ducks. The following advice is given for wildlife rescue in Victoria: "*Catching and handling injured wildlife should be done quickly and expertly to avoid further stress or injury.*"⁵ While dogs are quick, they are not expert. A downed duck is likely to have at least one broken wing, and being snapped up by a dog is likely to increase the pain of these existing injuries and produce sheer terror in the duck.
- **More practice and education.** A shotgun is not a humane weapon regardless of the skill of the shooter. Referring back to the comment by Mike Elliott (2): "... no matter how hard a person with a shotgun tries, unless it is point blank, they cannot guarantee a kill in the way that a good rifleman might ... "

9. Conclusion on the cruelty of shooting with shotguns

There is extensive research to show that duck shooters wound ducks. Even shooters admit this, although they underestimate the extent and severity of the problem. All wounded ducks suffer, regardless of whether they are picked up and killed by the shooter, escape to die slowly, or fly on with injuries.

The public does not accept animal cruelty, as shown by repeated public opinion surveys, and the ongoing improvement in animal protection laws that reflect this change in social

⁴ <https://www.gma.vic.gov.au/hunting/duck/reduce-wounding>

⁵ <https://agriculture.vic.gov.au/livestock-and-animals/animal-welfare-victoria/pocta-act-1986/victorian-codes-of-practice-for-animal-welfare/code-of-practice-for-the-welfare-of-wildlife-during-rehabilitation>

attitudes. Duck hunters are a very small section of society (0.07% of SA voters) who are seriously out of step with community values.

The pro-hunting lobby wants to extend its social license to shoot by introducing a Wounding Reduction Action Plan. While components of this plan do reduce wounding, it is not to an extent that is acceptable to the public.

This submission has focused on duck hunting because that is the area where most research has been done. However, the same points apply to hunting other native birds: shotguns are always inefficient weapons that cause substantial wounding. In a study of quail shooting, the birds were fitted with a small radiotransmitter so that they could be tracked (21). Following a hunt, 33% of quail hit were not retrieved, a similar cripple rate to ducks.

The Standard Operating Procedure for the shooting of pest birds also refers to the problem of wounding (22):

“Wounded birds must be located and killed as quickly and humanely as possible with either a second shot preferably directed to the head or in restrained or immobile birds, a blow to the rear of the skull to destroy the brain. If left, wounded birds can suffer from the disabling effects of the injury, from sickness due to infection of the wound, from pain created by the wound or from thirst or starvation if unable to drink or eat. Wing fractures, which increase the likelihood of being taken by a predator, are common in wounded birds.”

The problem of wounding is that same as in duck shooting, so whether it is ducks, quails or unprotected native birds, such as corellas and galahs, the use of a shotgun is inhumane and unacceptable due to an inevitable high wounding rate.

Attitudes towards duck shooting

Opposition to recreational duck shooting has a long history in SA, but has thusfar been ignored by successive governments. Throughout the nineties, rescue teams with a vet went to Bool Lagoon to locate and treat ducks wounded by shooters.

In 1998, Mike Elliott MLC of the Australian Democrats introduced a bill to the Legislative Council to ban recreational duck shooting (2). In speaking to this Bill he referred to:

- advice from the government's Animal Welfare Advisory Committee in 1988, and again in 1996, to ban duck shooting;
- a petition calling for a ban with 52,444 hand-written signatures from South Australian voters, the second largest petition in SA history.

Three public opinion polls have been conducted over the years in SA, in each case, showing a clear majority of citizens opposed to duck shooting.

1. Roy Morgan 1996. There were 680 respondents, 72% in the city and 28% in the country.

Do you approve or disapprove of the shooting of native ducks for sport in SA?

Response	City (%)	Country (%)
Approve	19	27
Disapprove	70	61
Can't say	11	12

Even in the country, the majority of respondents (61%) disapproved of duck shooting, and only just over one quarter (27%) approved. In the city, 70% of respondents disapproved of duck shooting.

2. McGregor-Tan 2011. 400 Adelaide residents.

Do you think recreational duck and quail hunting should be allowed to continue?

No 61%
Yes 24%
Unsure 15%

There was a follow up question with prompting as to the effects of shooting.

If you knew that for every one duck killed, another is left wounded or maimed, would you agree that the recreational shooting of native ducks should be allowed to continue?⁶

No	83%
Yes	13%
Unsure	4%

Clearly the public strongly disapproves of wounding animals.

3. ReachTEL 2020. 3 marginal Adelaide electorates, 274, 285 and 457 respondents, respectively.

Should duck and quail shooting for sport be banned?

Yes	57%
No	30%
Unsure	13%

Those who answered 'No' or 'Unsure' were asked a follow-up question:

Given an estimate of up to one third of all ducks shot are wounded and not killed, do you think duck and quail shooting for sport in South Australia should be banned?

Yes (ban)	36%
No	45%
Unsure	19%

Combining responses to the 2 questions produced the following results:

Yes (ban)	73%
No	19%
Unsure	8%

Again awareness of wounding, which even shooters admit occurs, further strengthened opposition to duck shooting.

Recreational shooting of ducks and quail has already been banned in Queensland, New South Wales and Western Australia. Would you support or oppose your local

⁶ Then Director of Natural Resources, Allan Holmes, called the figure of 1 wounded for every 1 killed "a reasonable estimation"

state member of parliament if they wanted to work towards ending the recreational shooting of native birds in South Australia?

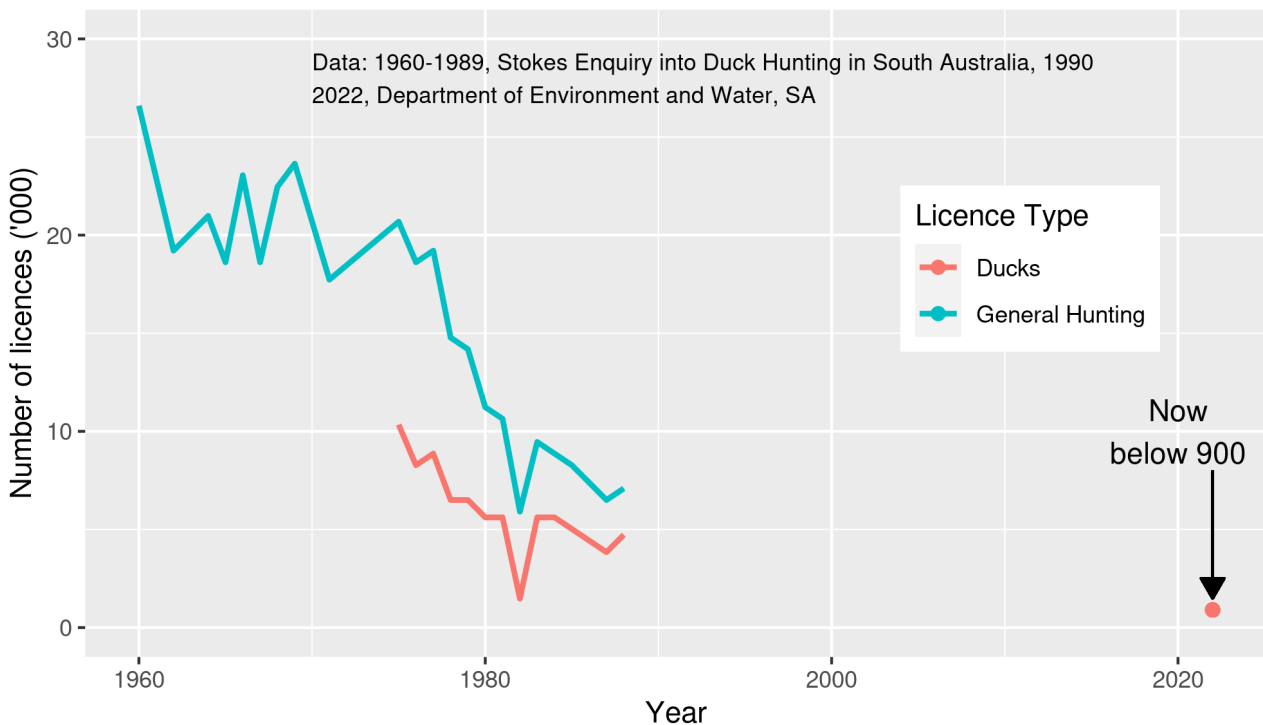
- Support** 74%
- Oppose** 12%
- Unsure** 15%

The NSW Animal Welfare Advisory Council (AWAC) examined attitudes to native fauna over the past 200 years, and observed increasing legislative protection, reflecting changing social attitudes (23). The Council concluded:

3.20 “Notwithstanding that humans may have developed as hunter gatherers, it must still be seen that the recreational shooting of duck and quail in an urbanised and industrialised society like modern day New South Wales runs counter to the general direction of social thinking and practice in the state over the past 200 years.”

Changing social attitudes can also be seen in the profile of hunting itself. In 2022, less than 900 South Australians held a duck shooting permit. The graph below shows how this compares to numbers in the past.

South Australian hunting licence numbers, 1960 to 2022
During these 6 decades, the SA population tripled



The pro-hunting lobby claims that duck hunting is a tradition – it is clearly a dying tradition, and one not supported by the general community.

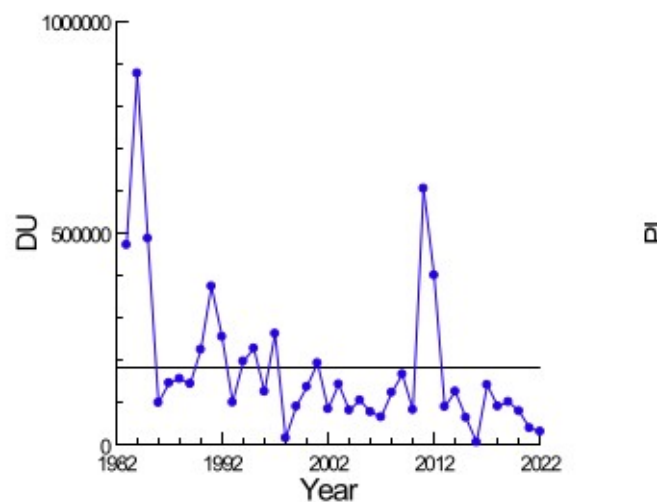
Correcting misconceptions

1. A state-wide open season for recreational hunting is NOT needed to control duck populations

The work of Professor Richard Kingsford, Director of the Ecosystem Science Centre at the University of NSW, clearly demonstrates that hunting has a weak effect on duck populations (24). This conclusion is based on annual aerial surveys of waterbird populations across eastern Australia since 1983.

Waterbird abundance has declined by over 70% over the survey period in the Murray-Darling Basin (developed), whereas there has been no significant change in the Lake Eyre Basin (undeveloped). Professor Kingsford and colleagues developed a model to determine which factors best predicted waterbird populations. Water resource development (dams, irrigation), river flow and rainfall were the most important determinants. The availability of water creates habitat for feeding and breeding. Hunting was only weakly related to numbers.

The decline in duck populations is likely to continue, since the low river flow rates will be exacerbated by climate change (25). The following chart shows the decline in duck numbers since the annual aerial survey began (26).



So, an extensive data set shows that hunting does NOT determine duck numbers. There is also a practical reason why a state-wide open season would be an inefficient way to protect crops.

Time and place: If ducks are causing damage to crops, it is in a particular place at a particular time, not state-wide for a 3 month period.

Species: of the 5-7 species that can be shot in any particular season, some are much more likely than others to forage in paddocks, but all are equally targetted.

Landholders have the option to apply for a Permit to Destroy Wildlife if ducks are causing crop damage. A document obtained through the Parliamentary Research Library for the period 2000 -2009 shows that only Pacific Black Ducks and Wood Ducks are considered potential “problems”, and that:

- Pacific Black Ducks are not a problem – a total of only 27 were killed over the 10 year period.
- Wood Ducks are a minor problem – there were an average of 40 permits issued a year, and an average of 14 ducks killed per permit.

Thus there is no evidence that ducks cause any significant agricultural damage in South Australia. In addition, the destruction permit applies basically to one species, wood ducks, not the whole range of “game” species, and shooting does not control overall duck numbers. Therefore recreational shooting and destruction permits need to be considered as completely separate issues.

As concluded by the NSW AWAC (23):

*5.19 “Arguments have been put forward by elements of the pro-hunting lobby that it is necessary to cull populations of waterfowl in order to control their numbers. **There is no evidence that shooting of waterfowl is a major contributor to the control of population numbers.** Upper limits of population size are much more likely to be determined by such factors as availability of food, water and nesting sites. It would be contrary to the principles of ecology for waterfowl populations to increase indefinitely as some pro-hunting lobbyists have suggested would happen if sports hunting were stopped.”*

2. Duck shooting is NOT an acceptable way of getting meat

Duck shooters like to deflect criticism by asking their critics: Do you eat meat? Their claim is that shooting ducks to eat is no different to buying meat from abattoirs.

However, by the admission of shooters themselves, they routinely wound ducks. For example, the Vice-President of CHASA has stated: “*Look sure – we’re not disputing the fact that we do get wounding when we hunt ducks with a shotgun.*”

As explained in a previous section, wounded ducks fall into 3 categories:

- picked up by shooter/dog and killed;
- escape and die slowly (cripples);
- live on with pellets in their bodies (flying wounded).

None of these categories apply to abattoirs. Animals do not routinely get wounded, and certainly do not escape wounded. Any slaughtering operation that was run with the poor welfare standards of duck shooting would surely be closed. Mike Elliott MLC made this point very clearly (2):

*“Abattoirs quickly and efficiently kill animals and as far as possible they strive to minimise any cruelty aspects. There is no doubt that over time we have refined the techniques in that regard. It is probably possible that we can further refine our techniques to cause minimal suffering. **Nothing can be done to refine the use of shotguns in an act of recreational cruelty which is not really a sport at all.**”*

3. Duck shooting is NOT necessary to maintain men’s mental health

Pro-hunting lobby groups, such as CHASA, maintain that duck shooting “is a vital ingredient in our mental health.”

One reason why such a claim is nonsensical is that duck shooters go out at most for a few days each year. As Field and Game NSW testified to the Animal Welfare Advisory Council (23), 70% of shooters went out for one day a year, possibly the opening day, and only 25% went out 5 times. Anecdotal evidence suggests the same applies in South Australia. So how can one day a year, or at most a few days, be crucial to mental health?

Research increasingly shows that contact with nature has many benefits, and there are even nature-based therapy programs. However, contact with nature can be as simple as walking in a park or on the beach, and certainly doesn’t need to involve killing.

Similarly, group activities enhance wellbeing by providing companionship and a sense of belonging, but again this benefit doesn’t require killing. Camping with friends fits the bill. For anyone who values socialising and skillful shooting, the SA Clay Target Association lists 23 clubs across SA that practice target shooting. The Hellenic Shooting Sports Club at Monarto, offering varying types of target shooting, emphasises the social aspect of its operation in its slogan – shooting sports for the whole family.

So, there are numerous opportunities for outdoor activities and socialising that benefit mental health but do not involve killing. An added advantage is that these activities can be pursued throughout the year, not just for a few days at most.

4. Duck shooting does NOT make a substantial contribution to regional economies

In 2012, the Australia Institute carried out a survey of Victorians, in response to claims that an end to duck shooting would be financially damaging to regional economies (27). Here are some of the findings.

1. There are relatively few duck shooters, so just in numerical terms this group is not in a position to make a large economic contribution, especially since they shoot at most for a few days a year. This point is even more relevant in South Australia. In 2022 there were only 1127 duck shooting permits issued, mostly to South Australians but also some Victorians.
2. In the survey, hunters indicated they would spend their money in other ways if they could not shoot ducks. Only 2% said they would not substitute another activity. Options that don't involve killing were camping, motoring and boating. As the Australia Institute concluded (p.3):

“ ... economic theory and interstate experience shows that hunters who are prevented from shooting ducks will instead use the money they once spent on hunting in the pursuit of other economic activities. Duck hunting bans have had no discernible economic effect in other states.”
3. Intrastate tourism to regional centres is far more important to the economy than duck shooters. Tourism Research Australia – Regional Profiles details, for example, visits to the **Limestone Coast**.⁷

In this region pre-pandemic in 2019:

- there were 423,000 intrastate overnight visitors
- who stayed an average of 3 nights
- and spent just under \$160 million .

The contribution of under 900 South Australian duck shooters pales into insignificance in comparison.

A final point is that duck shooters are not big spenders, as noted in the Animal Welfare Advisory Council (23), and supported by our own observations.

8.6 “Anecdotal evidence as well as the information provided by hunters themselves suggest that during the open season, and particularly on the opening weekend, the majority of hunters visiting an area tend to camp. This being the case most supplies and equipment would be brought with them rather than purchased at local centres, excepting perhaps petrol and perishables”.

In contrast, bird watching tourists do spend money. In 2019 (pre-covid), Tourism Research Australia added bird watching as an activity in its annual survey of tourists. The results show that large numbers of both international and domestic overnight tourists are involved in bird watching.

⁷ <https://www.tra.gov.au/regional/tourism-region-profiles/tourism-regional-profiles>

	Number	Expenditure
International	608,000	\$2.6 billion
Domestic overnight	350,000	\$414 million

However, the presence of duck shooters may deter other tourists and therefore have a negative economic impact. On the SA Department of Environment website, the following warning is posted to visitors of conservations areas during the March to June shooting season: *“Please note that during this period you may hear firearms discharging while visiting the below parks”*. The warning is followed by a list of National and Conservation Parks adjacent to shooting areas.

A ReachTEL survey carried out on behalf of the Treasures not Targets coalition against duck shooting in 3 marginal Adelaide electorates in March 2020 found that 7 of 10 respondents would not visit an area where duck shooting was taking place. So the net economic effect of duck shooting on regional economies may be a negative one.

5. Shooters do NOT make a substantial contribution to waterbird conservation

As shown by the work of Professor Kingsford and colleagues, wetland habitat and water bird populations are in decline (26). This problem needs to be addressed on a large scale, such as the Murray-Darling Basin Plan, rather than a local level.

Australian duck species are highly nomadic to deal with an erratic climate. Ducks currently in SA can migrate throughout the eastern states, depending on where water is found. Factors that have reduced the availability of water in this area include 240 large dams, 6800GL of water extracted from the Murray-Darling river system, and the effect of climate change, obviously large-scale factors (24). Only an overall basin plan can reverse the decline in waterbirds.

In comparison, the conservation efforts of local shooters will have minimal impact on waterbird conservation. If they are serious about conservation efforts, rather than just supporting nice places for them to shoot, they should join groups like the Friends of Hacks and Bool Lagoon. This RAMSAR site has been seriously degraded and is in need of urgent attention. However, here too volunteers can only achieve so much and really need substantial government support to restore water levels in Bool Lagoon.

In terms of commerical enterprises, conservation claims are also open to doubt. For example Water Valley has a wetland system open to duck shooters, but also has a game reserve where hunters pay large sums of money to trophy hunt deer⁸.

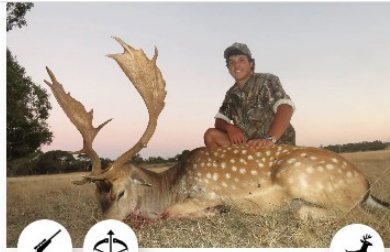
⁸ <https://huntingtrips.com.au/hunting-trips-tours-south-australia/>



Water Valley Meat Deer Hunt
Tru Blu Hunting
 South Australia
 1 day

Fill up your freezer with delicious fallow, red and chital meat hunting the world renown Water Valley in SA....

\$1200 or \$1080 for members



Water Valley Trophy Deer Hunt
Tru Blu Hunting
 South Australia
 1 day

Hunt your red, rusa, sambar, chital or fallow trophy in the world renown Water Valley...

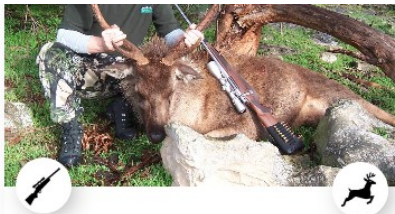
\$1600 or \$1440 for members



Water Valley Deer Cull Hunt
Tru Blu Hunting
 South Australia
 1 day

Hunt your red, rusa, sambar, chital or fallow trophy in the world renown Water Valley...

\$1350 or \$1214 for members



Water Valley sambar deer hunt
Magnum Hunts
 South Australia
 3 days

In South Australia all hunting is confined to the Water Valley Game Reserve. Water Valley has a large population of Sambar Deer, which is possibly the largest private herd in the world....

\$1350 or \$1215 for members



Water Valley rusa deer hunt
Magnum Hunts
 South Australia
 3 days

All hunting restricted to the Water Valley Game Reserve. Trophies average thirty to thirty two inches in size with several a year up to thirty four inches....

\$1350 or \$1215 for members



Water Valley red deer hunt
Magnum Hunts
 South Australia
 3 days

The hunting of red deer in South Australia is confined to Water Valley game reserve where clients have collected many world-class red stags. Our hunters success on stags 12 points is 100%....

\$1350 or \$1215 for members

This is not a culling program to control an introduced animal. As the peak body, the Centre for Invasive Species, has said of genuine culling programs⁹:

⁹ <https://pestsmart.org.au/wp-content/uploads/sites/3/2023/02/National-Code-of-Practice-for-Feral-and-Wild-Deer.pdf>

*“Aerial shooting of feral deer is a primary technique as it removes many animals quickly over large areas. Ground shooting of feral deer can also be a primary control technique when it is conducted as part of a **coordinated and intensive program**.*

*Poorly executed pest control programs can become on-going operations that are ineffective, do little to achieve long-term beneficial outcomes, and require more animals to be killed. Common reasons for poorly executed programs include **an insufficient intensity of the pest control activities ...**”*

Inviting paying tourist groups onto the property to hunt trophies is not a coordinated and intensive culling program, indeed there is an incentive to maintain the deer herd to maintain the income stream, which is contrary to any conservation goals. Maintaining wetlands to charge duck shooters is also a dubious conservation motive. In the absence of duck shooting, they could just as easily conduct bird watching tours, which are much more ecologically friendly.

Mike Elliott MLC summed up the issue very succinctly (2): “... *the question could be asked, how much conservation justifies how much cruelty? The issue of cruelty will ultimately have to be debated alone.*”

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