

Out for a duck

An analysis of the economics of duck
hunting in Victoria

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Summary

- Less than half of one per cent of Victorians are active duck hunters, while 87 per cent support a ban on duck hunting. Three per cent of respondents to our survey had participated in duck hunting and intend to do so again.
- Claims that duck hunting – or any recreational hunting – contributes significantly to the economy of Victoria are false. They assume that without hunting any related expenditure would be lost to Victoria. On the contrary, our survey shows that if duck hunters were prevented from hunting ducks they would go fishing, hunt other species, or go camping. There would be no impact on expenditure in Victoria from a duck hunting ban.
- Revenue from non-hunting tourism is far more important to Victoria's economy. In fact, more than half of survey respondents would be less likely to holiday in an area with duck hunting.
- Most Victorians are willing to pay for improvements in animal welfare.
- Thirty per cent of respondents are willing to pay to end duck hunting.

The non-monetary benefits of ending duck hunting and the improvement in welfare of the non-duck hunting public, are far greater than the non-monetary losses that hunters would incur from a ban. We estimate this benefit of banning duck hunting at around \$60 million per year.

Introduction

Every year images of bloodied, flapping ducks appear on televisions in Victoria and across Australia, as protesters and bird rescuers clash with duck hunters in Victoria's wetlands. From mid-March to mid-June, hunters may shoot ten ducks per day in state forests, on crown land, in state game reserves and in some coastal parks.¹ Duck hunting is controversial – many people view the practice as inhumane, with as many as 6.6 ducks being wounded for every 10 birds shot².

While ducks are the obvious losers in the practice of duck hunting, hunting advocates claim an unlikely winner emerges from the season – the Victorian economy. Estimates of hunting's importance to the Victorian economy have typically involved large numbers. It has been claimed:

- The annual direct expenditure of duck hunters is estimated by the minister to be \$40 million. The indirect expenditure will be tens of millions more.³
- The activity generates more than \$70 million each year and supports jobs in hospitality, and creates market activity through the supply of vehicles, boats, firearms and ammunition, plus camping and hunting equipment.⁴
- It has been estimated that deer, duck and quail hunters in Victoria spend in excess of \$96 million (2006-07 figures) on hunting annually.⁵

Regardless of which expenditure estimate is correct, the net economic benefit that Victoria receives from duck hunting, or any other sort of hunting, is actually close to zero. This paper argues that banning duck hunting, as proposed by the Royal Society for Protection of Animals (RSPCA) Victoria, would make absolutely no difference to expenditure levels in the state. Evidence presented below shows that this is because every dollar that is currently spent on duck hunting would be spent on another activity, such as the hunting of other species, fishing, boating or camping.

If hunters did not go hunting, they would not stay at home and dispose of the money they would previously have spent on hunting. Rather, 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.

Claims made in this report about the likely behaviour of duck hunters, and non-duck hunters, are based on a survey of 503 Victorians conducted in September 2012 and a review of the relevant economic literature.

The (un)popularity of duck hunting in Victoria

While the Victorian minister for Agriculture, Peter Walsh, claims that hunting is a “popular recreational activity [and] an important traditional pastime” our survey found that only seven per cent of respondents had ever participated in duck hunting and only half of these people planned to do so again.

¹ Department of Primary Industries (2012). *2012 Duck Hunting Season*.

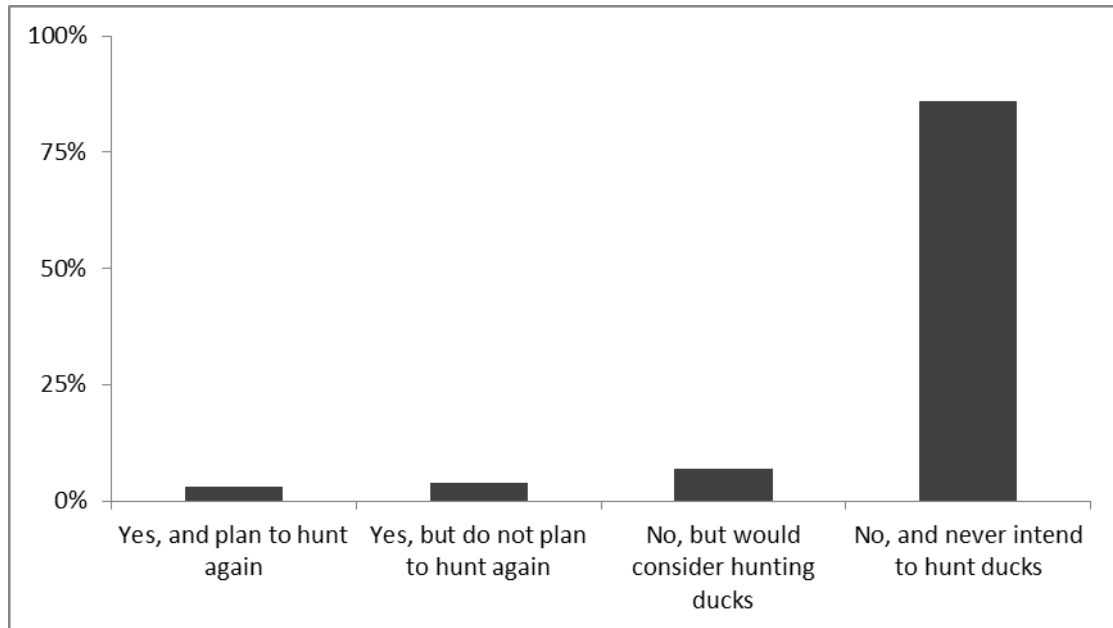
² RSPCA. (2009). 'What Is the RSPCA's View on Duck Hunting?'

³ Patterson, B. & Levy, L (2012) *The duck hunting debate*.

⁴ Walsh, P. (Minister for Agriculture and Food Security) (2011). *Creation of Game Victoria Signals a New Era*.

⁵ Regulatory Impact Solutions (2012). *Wildlife (Game) Regulations 2012 Regulatory Impact Statement*

Figure 1: Participation in duck hunting in Victoria



Source: The Australia Institute survey – September 2012

According to state government data these results are likely to overstate the popularity of duck hunting in Victoria. The Department of Primary Industries (DPI) claims that there are 24,500 current duck-hunting licences, while Victoria's population is more than 5.5 million, representing less than half of one per cent of Victorians.⁶ A 2007 poll by Roy Morgan Research found that 87 per cent of Victorians support a ban on duck while analysis by hunting opponents suggests:

The numbers of licensed duck shooters in Victoria has fallen from 95,000 in 1986 to about 20,000.⁷

What's a shooter to do? Go fishing!

While duck hunters are a small and declining proportion of Victoria's population, the economic significance of duck hunting expenditure, regardless of which estimate is most accurate, accounts for a trivially small proportion of Victoria's \$323 billion Gross State Product (GSP)⁸. Significantly, however, if duck hunting were banned in Victoria, the current level of expenditure by duck hunters would not be 'lost' to the Victorian economy. Rather, as is shown below, it would simply be spent on substitute activities such as fishing and camping. Consider the following example:

A Victorian consumer sets out to purchase bananas but discovers that no bananas are available and buys apples instead. While he may be disappointed to have missed out on his first preference, if he spends the same amount on apples as he planned to spend on bananas then neither the fruit retailer nor the Victorian economy is in any way harmed. To the extent that the consumer substitutes other consumption

⁶ Regulatory Impact Solutions (2012).

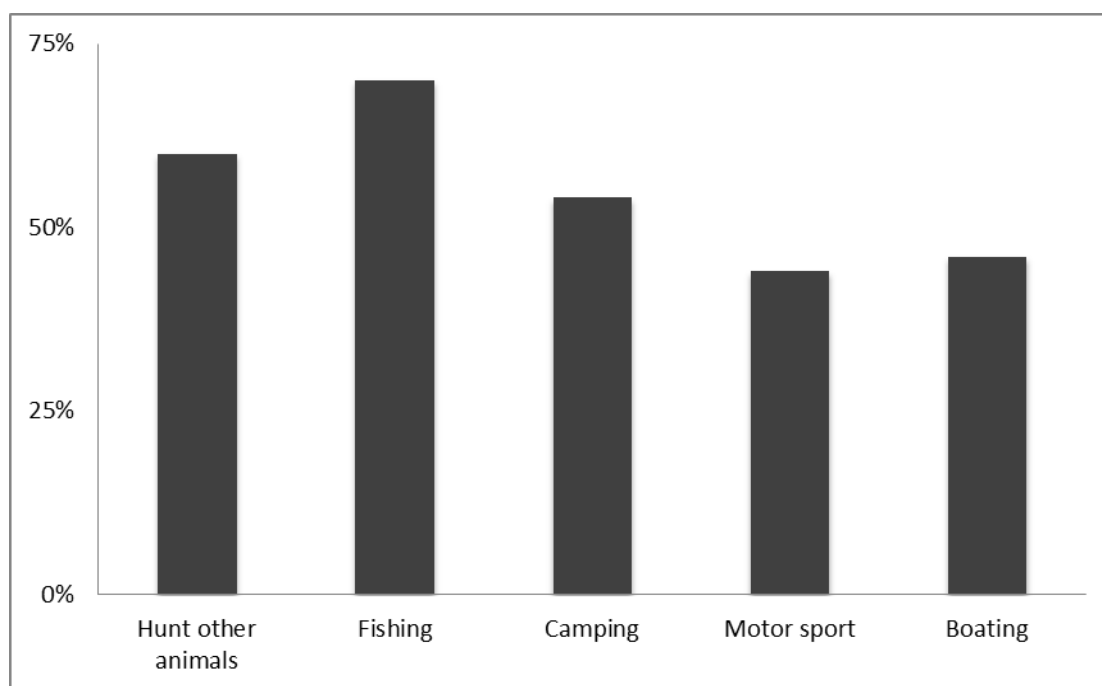
⁷ Patterson, B. & Levy, L (2012).

⁸ ABS (2012)

expenditure for his planned banana expenditure, other retailers benefit at the expense of the fruit retailer, but the impact on the Victorian GSP remains zero.

Figure 2 shows the activities that, according to the survey described above, existing and potential duck hunters are likely to undertake if a ban on hunting were to be introduced. It shows that the most likely substitutes for duck hunting are fishing (70 per cent) other forms of hunting (60 per cent) and camping (54 per cent).

Figure 2: Substitute activities for duck hunting

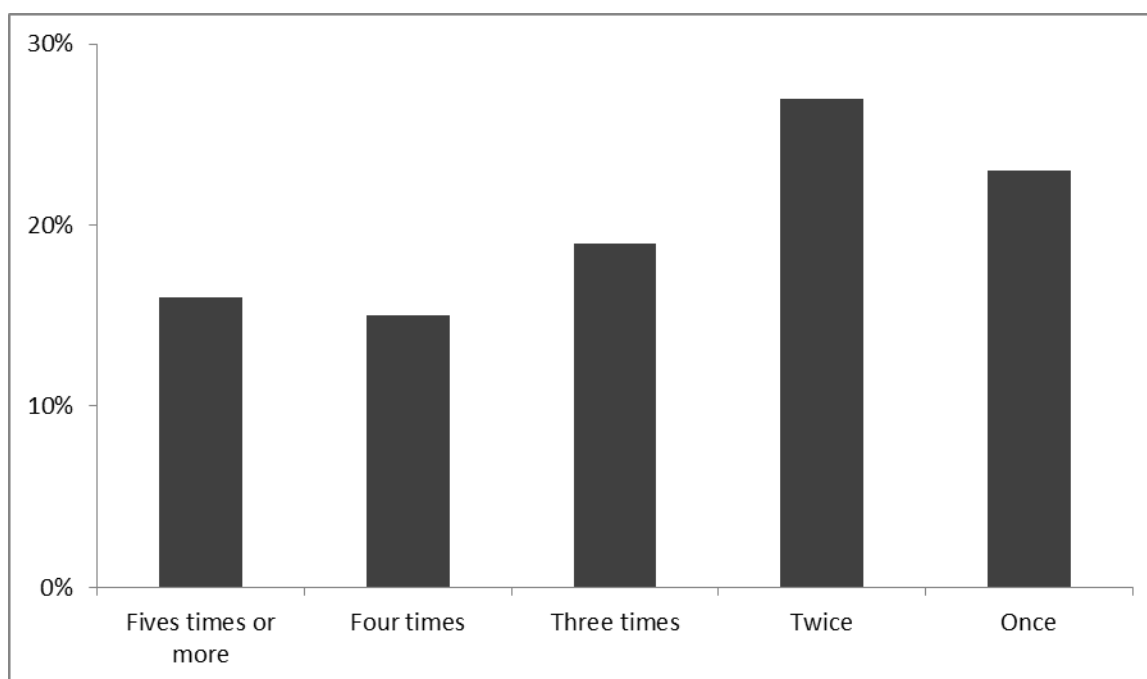


Source: The Australia Institute survey – September 2012

Only two per cent of duck hunters claimed that they would not substitute another activity for duck hunting if it were banned. That said, unless these hunters literally destroyed the money they spent on duck hunting, the increase in their expenditure on other forms of consumption would have the same impact on the Victorian economy as their previous expenditure on duck hunting had. That is, the inability or unwillingness of respondents to describe their most likely substitute for duck hunting does not imply that they are likely to tear up their \$50 notes if duck hunting were banned.

I don't shoot but I do spend

While only seven per cent of Victorians have ever gone duck hunting, and less than half of those plan to do so again, seven in ten (72 per cent) Victorians holiday in regional Victoria, with more than half doing so three or more times each year.

Figure 3: Number of trips to regional Victoria each year

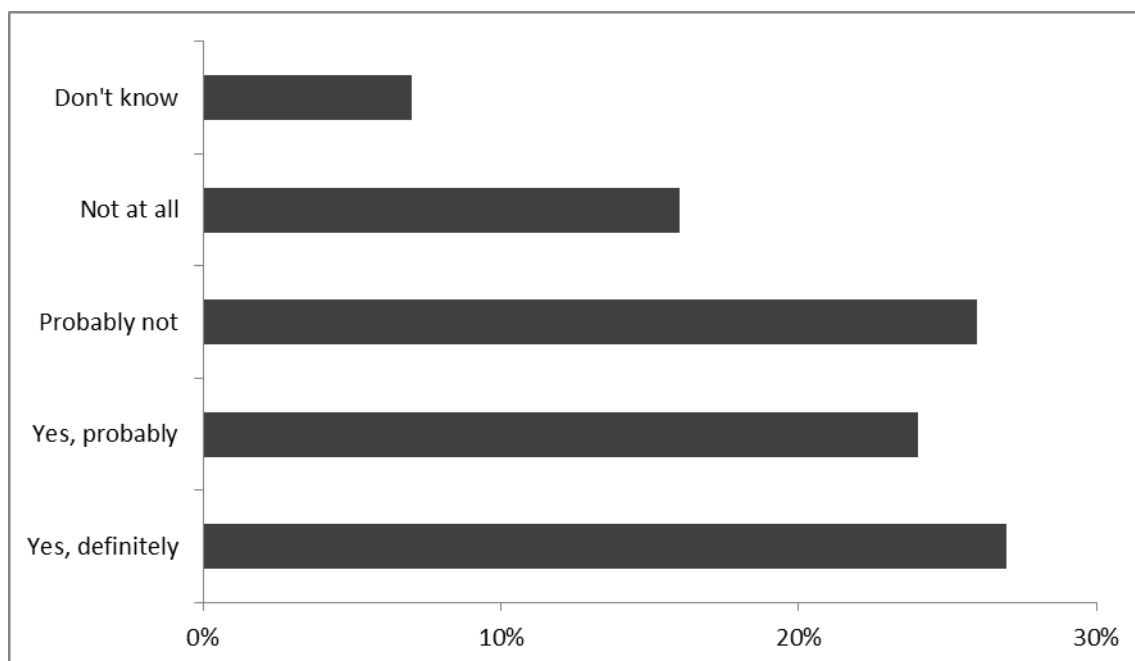
Source: The Australia Institute survey – September 2012

The importance of Victorian intrastate tourism has been highlighted by Tourism Victoria, which found that Victorians going on overnight trips within the state contributed \$1.8 billion in industry value added in 2010-2011.⁹

Survey respondents were asked whether, in choosing a holiday destination within Victoria, they would try to avoid areas in which duck hunting occurs. The survey found that 51 per cent of respondents said that they would 'definitely' or 'probably' avoid duck hunting regions, while only 16 per cent said that it would not influence their decision at all.

⁹ Tourism Victoria, (2012), Economic Contribution of Tourism to Victoria 2012-11.

Figure 4: Proportion of Victorians who would avoid holidaying in duck hunting areas



Source: The Australia Institute survey – September 2012

The results make clear that while duck hunters may inject some funds into some regional economies they also deter other tourists from visiting those regions and, in turn, offset any benefit that their expenditure may have brought.

Economics and animal welfare

Our analysis so far has focused on the financial aspects of duck hunting and tourism in Victoria, finding that a ban on duck hunting is likely to have only trivial impacts on the Victorian regional tourism market and the Victorian economy more generally. However, economic analysis is concerned with more than just financial impacts. As the Victorian Treasury points out:

Analysis should not be restricted to tangible or monetary items and, where applicable, should include an assessment of less tangible impacts (such as changes in environmental amenity, health and safety outcomes, and other non-monetary outcomes).¹⁰

Important non-monetary impacts of duck hunting (or banning duck hunting) are the wellbeing of the general (non-hunting) Victorian community as well as the wellbeing of duck hunters.

Wellbeing of the non-hunting community

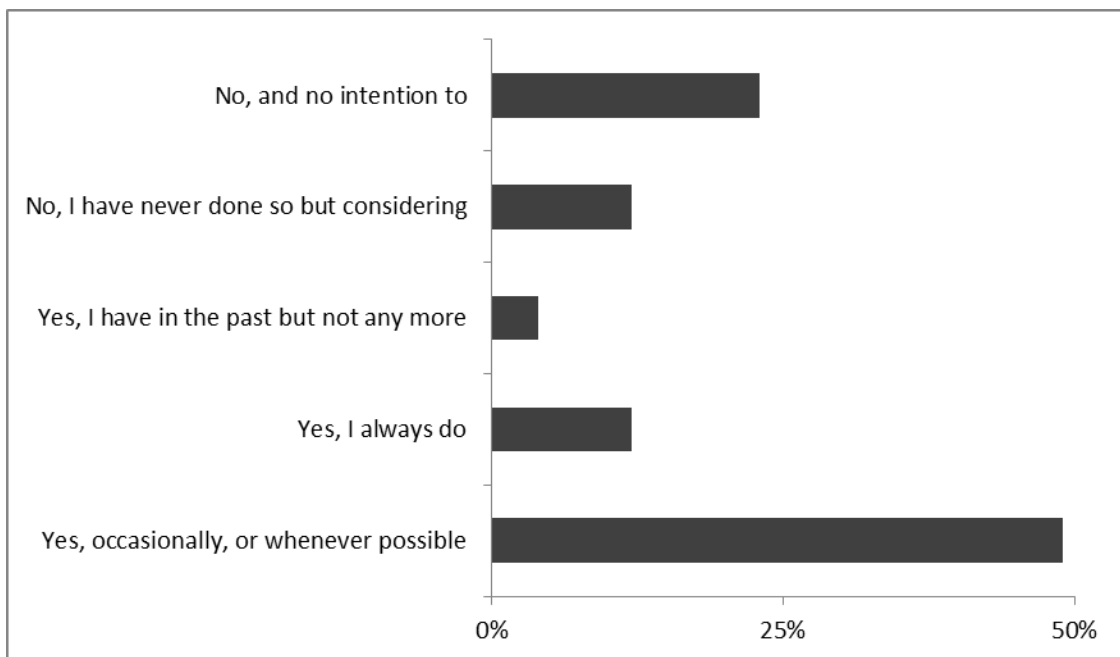
Economics is anthropocentric by nature – it does not (yet) have tools for incorporating how ducks feel about their own welfare into its decision making. Most humans, however, are concerned with animal welfare. This is demonstrated by our care for our pets, laws against animal cruelty and support for organisations such as the RSPCA. The public response to images of animal cruelty in the live cattle trade last year showed just how widespread such

¹⁰ Government of Victoria. (2011). *Victorian Guide to Regulation*, p.22.

concerns have become. The national outcry resulted in federal government intervention and a petition against the trade attracting over 230,000 signatures.¹¹

Furthermore, while concern about animal welfare is generally a non-monetary outcome, in some instances markets do provide an opportunity for people to express their preferences for improved animal welfare in monetary terms. Demand for free range eggs, hormone-free pork and grass-fed beef, not to mention vegetarian options in restaurants, for example, all show that many people are willing to pay for animal welfare when they can. Our survey asked respondents if they ever chose to pay a premium for products that are ethically produced – nearly two thirds of respondents are willing to pay a premium for animal welfare, while only 23 per cent said that they would never consider doing so.

Figure 5: Paying for ethically produced animal products



Source: The Australia Institute survey – September 2012

Measuring Victorian's willingness to pay for the welfare of wild ducks is more difficult as no market exists for the 'benefits' of reduced cruelty. Instead of directly measuring these benefits, economists generally, and the Victorian Treasury in particular, recommend using non-market valuation methods to provide indirect evidence of the benefits to the community of introducing a policy such as a ban on duck hunting. One such non-market valuation technique is 'contingent valuation', in which survey respondents are asked how much they would be willing to pay to secure a particular outcome, such as a ban on duck hunting. This information serves as the basis for estimating these non-market values.

To that end, the survey respondents contacted for this study were asked: "If others had to pay as well, would you be willing to pay a small amount to prevent duck hunting?" The following responses were received.

¹¹Grattan, M. (2011). *People-power victory on live exports*.

Table 1: Willingness to pay to prevent duck hunting

Amount	Per centage
20 cents	13
\$1	8
\$2	3
\$3	1
\$4	1
\$5	3
Other amount	1
I would not be willing to pay	70
	100

Source: The Australia Institute survey – September 2012

Table 1 shows that 30 per cent of Victorians report that they would be willing to pay a small amount each week to prevent duck hunting in Victoria. Victoria has an adult population of approximately 4.3 million people.¹² If the amounts reported were collected only from the proportions of the population that reported a willingness to pay, the total collected would be \$76 million per year. Economic theory holds that the continuation of duck hunting represents a welfare loss to these people, who would be willing to pay to improve their own welfare by improving the welfare of Victoria's ducks.

Wellbeing of duck hunters

As we have seen, a ban on duck hunting would have zero effect on the level of economic activity (GSP) and employment in Victoria – hunters would spend their money on fishing, hunting other species, camping or other alternatives. That said, the welfare of hunters may be affected through the removal of their first recreational preference; going duck hunting. Again, non-market valuation methods need to be used to measure this change in welfare.

A 2011 study estimated South Australian duck hunters' 'consumer surplus' – the amount they are willing to pay over and above what the experience cost them.¹³ Those authors found that hunters would be willing to pay \$34-\$59 per hunting day (adjusted to 2011 dollars). The DPI estimates licensed Victorian hunters spend 300,000 days hunting all 'game' (ducks, deer and stubble quail)¹⁴. Even assuming that all these days were spent hunting ducks (equating to 12 hunting days per hunter), this would result in an improvement in the wellbeing of hunters of only \$10.2-\$17.7 million.

¹² ABS (2011)

¹³ Whitten, S. & Bennett, J. (2001). 'A Travel Cost Study of Duck Hunting in the Upper South East of South Australia',

¹⁴ Regulatory Impact Solutions (2012).

Table 2: Calculating the annual financial benefit of hunting in Victoria

Annual hunting days in Victoria	300,000
Consumer surplus for 1 day hunting	\$34-\$59
Annual benefit of hunting in Victoria	\$10.2m - \$17.7m

Source: Department of Primary Industries; Whitten and Bennett.

Comparing this to the value that the Victorian public attaches to the welfare of ducks, we see that duck hunting produces an annual welfare loss to Victoria to the order of around \$60 million. That is, the Victorian economy would be the same size regardless of whether duck hunting continued or not, and, remembering that the adverse impact of duck hunting on non-duck hunters is significantly greater than the benefits of hunting that accrue to the hunters, the continuation of duck hunting will result in a reduction in the net welfare of Victorians.

Conclusion

Very few Victorians hunt ducks and the great majority oppose having their ducks hunted. Only three per cent of respondents to our survey had hunted ducks and intended to do so again. Numbers of licensed hunters represent less than half of one per cent of Victorians.

Claims that the expenditure of duck hunters is economically significant are unfounded – if duck hunters didn't hunt ducks, they would still spend their money in Victoria, most likely on fishing, hunting other animals or camping.

Non-hunting tourism is vastly more important to the Victorian economy and to regional areas. Around half of tourists are less likely to spend their holidays – and their money – in areas where duck hunting occurs.

While the financial aspects of duck hunting are trivial, the impact on the welfare of Victorians is not. Most Victorians report a willingness to pay for animal welfare improvements in consumption goods, and 30 per cent would be willing to pay to prevent duck hunting. Basic calculations suggest that the continuation of duck hunting represents an annual welfare loss to Victorians of around \$76 million.

A ban on duck hunting would also have a non-monetary impacts on the welfare of hunters. Using a study from South Australia, we estimate that this impact could be worth up to \$17.7million, vastly less than the value to Victorians in improving animal welfare.

Our discussion of monetary and non-monetary economic aspects of duck hunting serve only to underline the obvious – that most Victorians oppose the hunting of their ducks and that the continuation of duck hunting represents the interests of a small minority being prioritised over the welfare of the majority.

Appendix

The Australia Institute carried out an online survey of 503 Victorians about participation in duck hunting and travel in Victoria. The survey also included questions about how much Victorians might be willing to pay to end duck hunting. The survey was conducted in September 2012.

The following questions were asked:

Q. Have you ever participated in duck hunting?

1. Yes
2. No

Q. If yes, do you plan to do so again?

1. Yes
2. No

Q. Would you ever consider participating in duck hunting?

1. Yes
2. No

Q. If you were prohibited from duck hunting would you be likely to opt for any of these activities instead?

1. Hunt another kind of animal (e.g. deer or pig hunting)
2. Go fishing
3. Go camping
4. Go away for the weekend to attend other events (e.g. motor sport)
6. Boating
7. Other, please specify
8. No, would not take up any other activity

Q. Do you ever go away on holidays or weekends getaway in regional Victoria?

1. Yes
2. No

Q. How many times per year would you go away for the weekend or for a short break?

(1,2,3,4,5 or more)

Q. On an average weekend away how much would you and the group you are holidaying with likely spend on accommodation, food, fuel and other expenses?

- Less than \$100
- \$100-\$300
- \$300-\$500
- \$500-\$100
- More than \$1000

Q. In choosing a holiday destination within Victoria would you try to avoid areas in which duck hunting occurs?

1. Yes definitely
2. Yes probably
3. Probably not
4. Not at all

Q. Do you ever choose to pay a premium price to purchase animal products that are produced ethically (e.g. free range eggs, organic meat?)

1. Yes, I always do
2. Yes, occasionally or whenever possible
3. Yes, I have in the past but not any more
4. No, I have never done so but considering
5. No, I have never consider and have no intention to

Q. If others had to pay as well, would you be willing to pay a small amount to prevent duck hunting? If yes:

1. 20 cents
2. \$1 per week
3. \$2 per week
4. \$3 per week
5. \$4 per week
6. \$5 per week
7. Other, please specify

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