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Select Committee on Hunting Native Birds

Animal Liberation appreciates the opportunity to provide the following formal submission in response to the Select Committee's inquiry into the hunting of native birds in South Australia (hereafter, 'SA').

Animal Liberation strongly opposes the recreational hunting of any species on ethical and animal welfare grounds. This position is based on the fact that this activity serves no legitimate conservation purpose and both target and non-target species are frequently injured or killed.

We understand that the Malinauskas Government has delivered on its election commitment to review duck hunting in SA.¹ Given that the current inquiry follows a recent inquiry undertaken by the Select Committee on Victoria's Recreational Native Bird Hunting Arrangements, it is reasonable to conclude that this provided the impetus for the current inquiry.² The current document will outline Animal Liberation's key concerns with the practice of recreational native bird hunting arrangements in SA. It will conclude by recommending the South Australian Government urgently ban the practice on environmental and animal welfare grounds.

Abbreviations

APO	Animal protection organisation
AWA	<i>Animal Welfare Act 1985 (SA)</i>
BHP	Basic hunting permit
BOM	Bureau of Meteorology
CHASA	Conservation and Hunting Alliance of South Australia
COP	Code of practice
DAWE	Department of Agriculture, Water and the Environment (Cth)
DEH	Department for Environment and Heritage (SA)*
DEW	Department for Environment and Water (SA)
EAWS	Eastern Australian Waterbird Survey
EPBCA	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
FGA	Field and Game Australia
GMA	Game Management Authority (VIC)
Hunting COP	Code of practice for the destruction of birds by shooting (SA)
IUCN	International Union for Conservation of Nature
Minister	The Minister for Environment and Water (SA)
NPWA	<i>National Parks and Wildlife Act 1972 (SA)</i>
OIE	World Organisation for Animal Health
OSDHP	Open Season Duck Hunting Permit
OSQHP	Open Season Quail Hunting Permit
SAAS	South Australian Aerial Surveys
SSAA	Sporting Shooters' Association of Australia
W&WS	Wetlands and Waterfowl Survey (SA)
Welfare Regulations	Animal Welfare Regulations 2012 (SA)

* indicates an agency, department or authority that has been superseded.

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Executive summary

- I. Global waterbird populations are in significant decline.³ This decline is a result of the degradation of wetland ecosystems worldwide^{4,5}, driven primarily by factors such as habitat loss⁶, land-use changes⁷, water resource development⁸⁻¹⁰, and other human-induced changes¹¹, including climate change.¹²
- II. Historical data compiled by the Department for Environment and Water (hereafter, 'DEW' or 'the Department') have demonstrated significant declines in South Australian duck numbers.¹³ All major indices for native Australian waterbirds show significant declines over time, well below long term averages.¹⁴ Total waterbird abundance decreased by 41% between 2020 and 2021, representing a decline of 54% from 2019 figures.¹⁵ In 2021, the total count of ducks belonging to the species hunted during SA's open season was less than a quarter of the long-term average.¹⁶ In 2022, nearly half (~48%) of surveyed wetlands supported no waterbirds and the abundance of all game bird species fell significantly below their long-term averages, with some declining by as much as ten times.¹⁷ Only 20% of available wetland habitat in SA was recorded as "wet" in 2021.¹⁸ Total abundance remains well below average at the 3rd lowest it has been in nearly four (4) decades.¹⁹
- III. Hunting almost always causes poor animal welfare outcomes.²⁰ These adverse outcomes are exacerbated by environmental conditions that threaten the viability of waterbird populations impacted by recreational hunting. The methods and techniques used for recreational hunting are likely to have substantial animal welfare impacts.²¹⁻²⁵ Recreational hunting is linked to numerous adverse animal welfare outcomes, with non-fatal wounding being a significant concern.²⁶ Though there are no conclusive figures demonstrating the number of birds, both target and non-target, who are killed or injured during SA's open season²⁷, estimates suggest that up to 10,000 birds are non-fatally injured each year.²⁸⁻²⁹
- IV. Duck hunting is banned in Western Australia, New South Wales and Queensland.³⁰ SA and Victoria are the only remaining jurisdictions that permit duck hunting.³¹ In states where the recreational hunting of native waterbirds remains legal, surveys show that two in three or ~67% residents oppose the practice and agree that it should be banned.³² In SA, recent surveys have found that ~75% agree that duck and quail hunting should be banned.³³⁻³⁵ Such popular support is increasingly backed by both advocacy³⁶⁻³⁷ and professional organisations.³⁸⁻³⁹

1. Background

1.1 General

Hunting involves pursuing or seeking game or wild animals with the aim of capturing or killing them, typically for sport or sustenance.⁴⁰ Hunting can be divided into three (3) broad categories: subsistence, commercial, and recreational.⁴¹⁻⁴² Though it incorporates a range of environmental elements, including stewardship⁴³, subsistence hunting refers to hunting primarily to obtain meat for human consumption.⁴⁴ Commercial hunting refers to the act of hunting with the intent to sell the meat or other parts of a captured or harvested game animal, typically for human or pet consumption.⁴⁵

In many Western societies, hunting is primarily practised as a recreational activity.⁴⁶⁻⁴⁷ Hunting differs markedly from other recreational pursuits in that it involves the intentional killing of sentient wild animals.⁴⁸ As Leader-Williams (2009) explains, with reference to the dictionary definitions of 'recreation' and 'hunting', the term 'recreational hunting' refers to "the pleasant occupation of going in pursuit of wild animals or game" (emphasis added).⁴⁹ Thus 'recreational hunting' refers to the pursuit and killing of animals for sport, leisure, enjoyment or entertainment.⁵⁰ As such, it does not carry any of the commercial or subsistence components of other types of hunting.⁵¹⁻⁵²

Public attitudes towards recreational hunting have passed through a number of distinct phases. First, hunting was regarded largely as a means to obtain food. As the population grew and became increasingly urbanised, however, hunting was redefined as a 'sport' that was undertaken for recreation.⁵³ Recreational hunting is an increasingly contested practice.⁵⁴⁻⁵⁹ This has been acknowledged by the SA Government.⁶⁰ As a result, recreational hunting has experienced diminishing social support.⁶¹⁻⁶² Arguments against its continuation stem from conservation, animal welfare, and animal rights perspectives.⁶³⁻⁷⁰ Critically, such perspectives are increasingly coalescing. For example, while many animal protection organisations (hereafter, 'APOs') explicitly oppose recreational hunting on principle⁷¹⁻⁷², this is increasingly supported by the policies of professional organisations.⁷³⁻⁷⁴

Fig. 1: types of hunting

Type	Description
Subsistence	Hunting primarily to obtain meat for human consumption. ⁷⁵
Commercial	Hunting with the intent to sell the meat or other parts of a captured or harvested game animal, typically for human or pet consumption. ⁷⁶
Recreational	The pursuit and killing of animals for sport, leisure, enjoyment or entertainment. ⁷⁷

While there are varying degrees of acceptance among the public of recreational hunting, both as an activity⁷⁸⁻⁸⁰ and as a management tool⁸¹⁻⁸³, participation in hunting has shown signs of long-term decline.⁸⁴⁻⁸⁵ Such decline is primarily due to an increase in protectionist values (i.e., seeing wildlife as part of one's social community and deserving of protection) and the weakening of utilitarian values (i.e., treating wildlife as a resource to be used for human benefit).⁸⁶⁻⁸⁹ Other factors include increasing urbanisation.⁹⁰⁻⁹² Dramatic declines in hunter participation have been observed across much of the Western world.⁹³⁻¹⁰⁰ The following subsection will outline recreational hunting in SA.

1.2 Recreational hunting in South Australia

1.2.1 Overview

Throughout the majority of the year, local water birds and quail in SA are protected under the *National Parks and Wildlife Act 1972* (hereafter, 'the NPWA').¹⁰¹ However, this protection is removed during a set period of time announced by the state government, known as an "open season," in which particular species can be legally hunted.¹⁰²⁻¹⁰³ The recreational hunting of native waterbirds in SA is currently restricted to seven (7) species of native duck and one (1) species of native quail. Though a number of species are unprotected under Schedule 10 of the NPWA¹⁰⁴, protected species of duck can be legally hunted under Section 53(1)(c) during the SA open season. The species of duck and quail subject to SA's open season are detailed in Fig. 2 below.

Fig. 2: duck and quail species hunted in SA¹⁰⁵

Species	Subspecies
Duck	grey teal (<i>Anas gracilis</i>)*
	Pacific black duck (<i>A. superciliosa</i>)*
	Australian shelduck/mountain duck (<i>Tadorna tadornoides</i>)*
	chestnut teal (<i>A. castanea</i>)*
	maned (wood) duck (<i>Chenonetta jubata</i>)*
	pink-eared duck (<i>Malacorhynchus membranaceus</i>)
	hardhead (<i>Aythya australis</i>)
Quail	stubble quail (<i>Coturnix pectoralis</i>)*

* indicates species hunted during the 2023 open season in SA

Estimates suggest that the number of recreational hunters in Australia ranges from 200,000 to 300,000 people, constituting approximately 0.8% to 1.2% of the total population of the country.¹⁰⁶ Recreational hunters in Australia are overwhelmingly male (~98%).¹⁰⁷ Though recreational duck hunting is legal in Victoria¹⁰⁸, South Australia¹⁰⁹, Tasmania¹¹⁰ and the Northern Territory¹¹¹, it is banned in Western Australia, New South Wales and Queensland.¹¹²⁻¹¹³

The recreational hunting of native birds in SA generally lasts fourteen (14) weeks.¹¹⁴ Hunters in SA are required to obtain a duck hunting permit, which entitles its holder to hunt protected duck species during a declared open season, under section 68A of the NPWA.¹¹⁵ The details of the past three (3) open seasons is detailed in Fig. 3 below. Hunting ducks in SA is only permitted by shotgun.¹¹⁶ The requirements relating to the use of firearms in hunting are outlined in the NPWA and the Hunting Regulations, with advice provided by various guides published by the Department.¹¹⁷ Trained dogs, commonly referred to as 'gundogs', may also be used to point, flush and retrieve shot birds.¹¹⁸

Fig. 3: open season details (2021-2023)¹¹⁹⁻¹²³

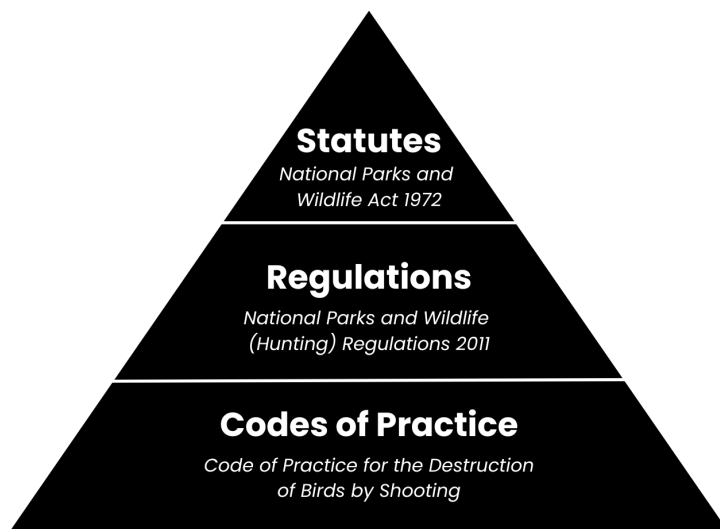
Year	Length	Species	Subspecies	Bag limit	Notes
2021	20 March - 27 June	Duck	Grey teal, chestnut teal, Pacific black duck, Australian shelduck, wood duck	4 ducks per hunter per day	The hunting of Australasian shovelers, pink-eared ducks and hardheads was prohibited in 2021. The Minister did not declare an open season for stubble quail in 2021
	N/A	Quail	Stubble quail	No open season	
2022	19 March - 26 June	Duck	Grey teal, chestnut teal, Pacific black duck, Australian shelduck, wood duck, pink-eared duck, hardhead	8 ducks per hunter per day	Bool Lagoon closed
	30 April - 31 July	Quail	Stubble quail	20 birds per hunter per day	
2023	18 March - 25 June	Duck	Grey teal, chestnut teal, Pacific black duck, Australian shelduck, wood duck	8 ducks per hunter per day	The hunting of Australasian shovelers, pink-eared ducks and hardheads was prohibited in 2023
	29 April - 30 July	Quail	Stubble quail	25 birds per hunter per day	

In 2020, a total of 904 duck hunters held permits in SA.¹²⁴ By comparison, Victoria has approximately 23,000 duck hunters who hold permits. Despite these contrasting figures, it is important to acknowledge that only 11,500 of these hunters participated in the 2022 duck hunting season in Victoria.¹²⁵ This translates to a participation rate of approximately 0.5%.¹²⁶ Similarly, it is important to note that, according to disclosure documents released by DEW's Freedom of Information Unit in January 2021, approximately one-third of all duck hunting permits issued in SA are held by interstate hunters.¹²⁷

1.3 Legislative overview

Duck hunting in SA is regulated by a range of laws, regulations and subordinate legislation, such as Codes of Practice (hereafter, 'COPs'). Of primary importance are the NPWA, the National Parks and Wildlife (Hunting) Regulations 2011 (hereafter, 'the Hunting Regulations') and the Code of Practice for the destruction of birds by shooting (hereafter, 'the Hunting COP').¹²⁸⁻¹³⁰ An overview of these is provided in Figure 4 below.

Fig. 4: basic hierarchy of SA legislation in relation to animal welfare protection and recreational duck hunting¹³¹



A range of laws apply to hunting on both public and private land in SA. These include the NPWA, the Hunting Regulations, the *Animal Welfare Act 1985* (hereafter, 'the AWA'), the Animal Welfare Regulations 2012 (hereafter, 'the Welfare Regulations'), *Firearms Act 2015* and the Firearms Regulation 2017. Of these, the NPWA, the Hunting Regulations and the AWA are of primary importance. The relevant provisions in each are outlined in Table 1, provided in the Appendices section at the end of this document.

DEW administers the NPWA, the Hunting Regulations and the AWA.¹³²⁻¹³³ DEW is described as "the go-to agency" for hunters and, with the assistance of the SA Police Force, its officers are responsible for enforcing the provisions of the regulatory framework.¹³⁴ All hunters in SA are obliged to comply with the requirements specified in the AWA and the Welfare Regulations.¹³⁵ Under the NPWA and the Hunting Regulations, the Minister for Environment and Water (hereafter, 'the Minister') has general administrative powers relating to decisions regarding the issuing of permits and the declaration of 'open seasons'.¹³⁶

1.3.1 National Parks and Wildlife Act 1972 ('NPWA')

Section 52 of the NPWA empowers the Minister to declare an 'open season' for the taking of animals of a particular species who are otherwise protected under the provisions of the Act.¹³⁷ An 'open season' is a period, typically set each year, in which the hunting restrictions imposed by the NPWA are lifted to 'unprotect' selected species. The open season usually lasts four (4) to five (5) months, is after the breeding season, and is subject to a number of conditions.¹³⁸

Under the NPWA, the Minister must make conditions applicable to the declared open season. Such conditions can include: 1) the species unprotected during the declared open season; 2) the numbers to be hunted (i.e., the 'bag limit'); 3) where hunting can take place and; 4) the timing and length of the open season.¹³⁹ These declarations follow an assessment of climate data and forecasts, as well as wetland conditions and waterbird abundance.¹⁴⁰ Such data can include Bureau of Meteorology data (hereafter, 'BOM') and various wetland and

waterbird surveys (e.g., the Eastern Australia Waterbird Survey). The Minister can revoke or revise declarations prior to or during open seasons in response to changing or deteriorating environmental conditions.¹⁴¹

There are a range of prohibitions or restrictions during the declared open season. Under current legislation, hunters must not: 1) hunt at night¹⁴²; 2) hunt from a boat or other vessel while it is under way¹⁴³; 3) use any engine-driven vessel or other device to rouse duck or quail so that they may be hunted¹⁴⁴; 4) scatter grain or other material to entice duck or quail so that they may be hunted¹⁴⁵; 5) keep any duck or quail alive unless authorised by the Minister¹⁴⁶ and; 6) sell the carcass of any duck or quail.¹⁴⁷

Traditionally, a 'full' open season in SA has comprised: 1) bag limits of up to twelve (12) duck and twenty-five (25) stubble quail per hunter per day and; 2) starting as early as mid-February and ending as late as June for duck or late August for quail hunting. Noting that the conditions of open seasons are dependent on seasonal data, including wetland or habitat conditions and bird abundance data, recent changes to these conditions are outlined in Figure 3 above (see p. 7).

1.3.2 Subordinate legislation: Codes of Practice ('COPs')

COPs are a form of subordinate legislation. They are referred to as "soft law" or "quasi-delegated legislation"¹⁴⁸ because they are a form of delegated legislation that may not be brought to the attention of Parliament or subjected to disallowance.¹⁴⁹ COPs are documents that set minimum standards and offer guidance to particular industries or those engaged in specified activities that risk harm to animals.¹⁵⁰⁻¹⁵¹ They intend to do so by outlining the "acceptable" ways in which animals may be used¹⁵², in addition to the "unacceptable" forms of use that are specified in legislation.¹⁵³ COPs also offer guidance in defining "cruelty" based on developments in animal welfare science.¹⁵⁴⁻¹⁵⁵ Thiriet (2007) notes that while this may lead one to believe that codes increase the protection of animals, this is rarely the case.¹⁵⁶

While regulations are positioned directly under the enabling statute, which authorises or enables the delegation of legislative law-making power to the executive branch of government, COPs are situated lower in the regulatory hierarchy.¹⁵⁷ As a result, provisions contained within codes are typically considered to be of lesser importance than those found in regulations, just as provisions within regulations are considered to be of lower weight than those in statutes. Though subordinate legislation, such as COPs, plays a role in modern common law, they are frequently criticised for their contribution to the inconsistent and contradictory framework of animal welfare legislation.¹⁵⁸⁻¹⁶¹ For example, Boom and Ellis (2009) criticise "the wide range of other legislative provisions and codes means the law lacks coherence and certainty".¹⁶² This is because state and territory governments have discretion over subordinate laws, leading to large variations across jurisdictions.¹⁶³

Thus, a range of critiques of COPs have been presented. For example, COPs are frequently formulated using advisory ("should") rather than obligatory language ("must") and contain minimal standards that are often crafted to satisfy economic or convenience considerations rather than provide for or protect animal welfare.¹⁶⁴ Critically, COPs can also provide defendants with an *exemption* or a *defence* against prosecution for acts that contravene state law.¹⁶⁵ This means that in cases where the general clauses of the relevant legislation provides animals with protection, this becomes "irrelevant" if it can be shown that the activities in question were undertaken in accordance with the relevant COP.¹⁶⁶ In such cases, the empowering Act often provides an *exemption* to an offence.¹⁶⁷ This is amply shown by reference to section 43 of the AWA, which contains a provision stating that "nothing in this Act renders unlawful anything done in accordance with a prescribed code of practice relating to animals". This approach differs to that taken in other Australian jurisdictions which provide *defences* against prosecutions for acts of animal cruelty if carried out in accordance with a COP.¹⁶⁸

1.3.3 Code of Practice for the humane destruction of birds by shooting in South Australia

A number of COPs are established under Part 6 the NPWA for the destruction of native wildlife. Though the Department states that "destruction should only be considered when the conflict between the animals and humans cannot be managed by non-lethal means"¹⁶⁹, it is difficult to reconcile this messaging with the recreational hunting of native waterbirds.

The Hunting COP was endorsed in 2007 and intends to set “an achievable standard of humane conduct” while detailing the “minimum required of persons shooting birds in South Australia”.¹⁷⁰ Hunters in SA must meet the COP’s requirements as a condition of the hunting permit obtained under section 68A of the NPWA.¹⁷¹

The COP provides advice on a range of issues relevant to duck hunters. Under the provisions of the COP, hunters: 1) must only target one bird at a time; 2) are advised that shooting at a flock is ‘unacceptable’ and; 3) are advised that injured birds must be retrieved and killed humanely.¹⁷² Though compliance with the Hunting COP is a condition of a hunting permit¹⁷³⁻¹⁷⁴, much of the content of the Hunting COP is couched in advisory (‘should’) rather than obligatory (‘must’) language. For example, hunters are advised that they should only shoot if a range of environmental or situational elements are met (e.g., if the animal is clearly visible and can be positively identified by the shooter).¹⁷⁵ Further, though the COP requires hunters to kill injured birds humanely, hunting permits do not require hunters to undertake training or demonstrate competency.¹⁷⁶ This has significant implications for animal welfare, governance, and enforcement.

1.3.4 Licencing

In SA, a permit system is in place that requires anyone who wishes to engage in hunting to possess the necessary permit, which must also be properly endorsed.¹⁷⁷ It is illegal to hunt or ‘take’ native animals protected under the NPW Act in SA.¹⁷⁸ Though some native species are not protected by the NPW Act¹⁷⁹, they are a ‘prescribed’ species. This means that hunting or ‘taking’ them during a declared open season may require a specific type of permit.¹⁸⁰⁻¹⁸¹ For example, a basic hunting permit (hereafter, ‘BHP’) does not permit its holder to ‘take’ protected animals.¹⁸² It authorises a person to hunt all species of introduced animals and a select number of native species.¹⁸³ Open Season Duck Hunting Permits (hereafter, ‘OSDHPs’), in addition to a BHP, are required to ‘take’ duck or quail per the provisions of the NPW Act. An open season quail hunting permit (hereafter, ‘OSQHP’) is required for those intended to hunt quail. A description and summary of the requirements applicable to each permit type is provided in Fig. 5 below.

Fig. 5: permit types, descriptions and requirements¹⁸⁴

Type	Description	Requirements
Basic Hunting Permit (BHP)	For hunting introduced species and unprotected native species identified in Schedule 10 of the NPW Act.	Hunters must: <ul style="list-style-type: none"> a) Obtain written permission from the landowner; b) Comply with the AW Act and its Regulations; c) Comply with the Hunting COP.
Open Season Duck Hunting Permit (OSDHP)	For hunting prescribed species of duck during a declared open season. Ducks must not be hunted outside of an open season or at night. Only species that have been declared in the current open season may be hunted.	Hunters must: <ul style="list-style-type: none"> a) Apply for a permit after an open season has been declared; b) Be a minimum of 14 years of age; c) Pass a Waterfowl Identification Test (WIT); d) Only hunt in an open Game Reserve or obtain written permission from the landowner; e) Comply with the Hunting COP.
Open Season Quail Hunting Permit (OSQHP)	For hunting stubble quail during a declared open season. Stubble quail must not be	Hunters must:

	hunted outside of an open season or at night.	<ul style="list-style-type: none"> a) Apply for a permit after an open season has been declared; b) Obtain written permission from the landowner; c) Comply with the Hunting COP.
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As they are in other jurisdictions where the recreational hunting of native waterbirds remains legal, such as New South Wales¹⁸⁵, Tasmania¹⁸⁶, and Victoria¹⁸⁷, recreational hunters in SA are required to pass a Waterfowl Identification Test ('WIT').¹⁸⁸ Though the purpose of this test is ostensibly to ensure that hunters can "demonstrate that they can identify waterbirds and each bird's conservation status to ensure the right species are targeted"¹⁸⁹, there is evidence demonstrating that non-target birds are killed or wounded during SA's open season.¹⁹⁰⁻¹⁹¹ This is seen in other Australian jurisdictions that continue to permit the recreational hunting of native waterbirds. For example, non-target species - including those protected under law - continue to be killed each year during the Victorian duck hunting season.¹⁹²⁻²⁰¹ This will be further discussed in the relevant subsections of this response.

2. Submission

The hunting and killing of waterbirds is an intensely debated issue, particularly as the target species are native and are not considered abundant or over-populated.²⁰² In fact, official long-term data demonstrates many duck species are in a state of significant and ongoing decline.²⁰³⁻²⁰⁷ Six (6) of the eight (8) species targeted in other Australian jurisdictions show ongoing and long-term population declines²⁰⁸ and two (2) are already listed as threatened under state law.²⁰⁹ In addition, concerns for the welfare of non-target species²¹⁰ and the environmental impacts of recreational hunting²¹¹ are also increasing. This submission will outline a number of serious concerns Animal Liberation has with the continued practice of recreational hunting targeting native waterbirds in SA. It will conclude by recommending that the SA Government urgently ban the practice on environmental and animal welfare grounds.

2.1 Animal welfare

2.1.1 What is animal welfare?

As managing animal welfare is an increasingly contentious issue, it is critical that its meaning be made clear.²¹² The issue of animal welfare is multifaceted, encompassing significant scientific, ethical, economic, and political dimensions.²¹³⁻²¹⁷ Although widely recognised as important, there is no universally accepted definition of animal welfare.²¹⁸⁻²¹⁹ This is because people's beliefs and perspectives on what constitutes 'good' or 'bad' animal welfare can vary depending on cultural, religious, or political backgrounds.²²⁰ Advocates of animal welfare aim to widen the moral sphere of society to encompass not only the interest of humans but also the interests of other-than-human animals.²²¹⁻²²² In order to achieve this, the animal welfare movement elevates animals as *stakeholders*.²²³⁻²²⁷ This has significant implications in the context of recreational hunting, particularly as animals are not only *affected by* but *affect* natural resource outcomes.²²⁸

Mellor and Reid (1994) outlined five (5) interrelated welfare domains including nutrition, environment, health, behaviour, and mental well-being, and defined "good welfare" as being present when an animal's needs in these domains are adequately met.²²⁹ These are known as the 'Five Domains' of animal welfare. Human actions can impact the quality of an animal's welfare in these domains.²³⁰⁻²³¹ In cases where human actions have negative effects on animal welfare, it has been argued that there is a moral obligation to mitigate these impacts to the extent possible.²³²⁻²³³

A core principle of animal welfare is that causing "unnecessary" suffering or harm to animals capable of experiencing such is morally wrong.²³⁴⁻²³⁶ This principle forms a critical aspect of the legal protection afforded to animals in many countries.²³⁷ The existence of this concept in state law, such as section 13(3)(g) of the AWA, suggests that individual animals have intrinsic value, which implies that we have some moral obligation towards them.²³⁸ However, the animal welfare ethic emerged primarily from concerns about how domestic animals are treated when used for purposes like food production and scientific research and, as a result, acknowledges that animals can be used for human purposes, even if this causes harm.²³⁹⁻²⁴⁰

2.1.2 Ethics and science

There exists a prevailing public intuition that recognises the moral significance of animals' lives and their inherent or inviolable interests in avoiding suffering.²⁴¹ This has led to changes in the way animal welfare is measured and monitored.²⁴² On the basis that recreational hunting imposes unavoidable yet unnecessary suffering²⁴³⁻²⁴⁴, it attracts significant ethical controversy.²⁴⁵ Hunters have increasingly encountered allegations from animal rights advocates, environmentalists, and the general public, portraying them as "bloodthirsty" and "ruthless".²⁴⁶ Moreover, critics have argued that hunting is unnecessary for survival and unable to regulate wildlife populations.²⁴⁷⁻²⁵⁰ In response to these allegations, hunters have emphasised their genuine concern for wildlife²⁵¹ or argued that their approach to acquiring food is more responsible compared to modern, industrialised farming practices.²⁵²

The extensive body of recent literature examining the ethical aspects of hunting often combines two (2) distinct issues: the ethics of hunting itself and ethics specific to recreational hunting. The former deals with the circumstances in which hunting can be ethically justified and takes an external perspective, focusing on objective considerations rather than individual motives and practices. The latter perspective, on the other hand, emerges from within hunting culture prevalent in Western societies. It revolves around arguments that support recreational hunting as a distinct activity separate from other forms of animal killing, such as slaughtering, shooting, or poaching. These arguments form the foundation of an ethical framework and ideology employed by recreational hunters to defend their pursuit against opponents of hunting.²⁵³ They follow findings of studies which suggest that respect for wildlife may be key to generating social support for recreational hunting.²⁵⁴⁻²⁵⁵

Scholars have examined the moral aspects of hunting by employing various ethical propositions.²⁵⁶ Hunting is considered unethical when: 1) it is driven by morally unjustifiable motives (e.g., seeking pleasure or excitement²⁵⁷⁻²⁵⁸; 2) it violates the rights of animals²⁵⁹; 3) it causes harm to sentient beings²⁶⁰ or; 4) it perpetuates the objectification of marginalised human members of society.²⁶¹ On the contrary, hunting has been presented as ethical when it: 1) contributes to conservation efforts²⁶²⁻²⁶³; 2) provides sustenance to humans²⁶⁴ or; 3) helps counteract the commodification of nature.²⁶⁵⁻²⁶⁶

Thus, there are three (3) fundamental categories of ethical challenges posed to hunting, each with corresponding defences. The first challenge originates from the animal rights movement and revolves around the harm inflicted upon individual sentient beings. According to this viewpoint, if a human practice causes pain and suffering to another being, the burden of proof lies with those who engage in the practice to justify its morality.²⁶⁷ Others contend that hunting violates the inherent value of animals by treating them as mere resources rather than conscious living beings.²⁶⁸ In response, some hunters reject the individualistic approach to hunting ethics by asserting that wild animals are inferior to humans, suggesting that their treatment is inconsequential.²⁶⁹

The second challenge adopts a more holistic perspective, focusing not on the actual harm inflicted on individual animals but rather on the potential harm to species populations or the broader biotic community. In this context, the moral concern lies in evaluating hunting practices based on their impact on the health of species or ecosystems.²⁷⁰⁻²⁷¹ This perspective holds that hunting becomes problematic when it interferes with natural evolutionary pressures on species.²⁷²

A final challenge pertains to hunting as a reflection of a dominating attitude towards nature. Adams (1996) contends that hunting objectifies animals by reducing them to objects of prey.²⁷³ According to this critique, this process ingrains in hunters a perception of animals solely in relation to their own desires and intentions, disregarding the independent existence of these living beings. The language used in game management further exemplifies this objectification. For example, animals who are hunted are referred to as "game" to be "taken" or "harvested," rather than acknowledging that they are killed, all while aiming to maintain optimal "stocks" of a species. This can be seen in the NPWA, which refers to the 'taking' of animals as including the act of hunting, catching, restraining, killing or injuring an animal.²⁷⁴ Such language conceals the reality of these wild animals themselves and thus obscures the hunters' responsibility for taking their lives.²⁷⁵⁻²⁷⁶

Given the declining social support and participation for recreational hunting outlined elsewhere in this document, it is increasingly necessary for hunting to be "hedged by an elaborate network of restrictions, conditions, and guidelines to prevent it from lapsing into a completely unacceptable activity" by modern standards.²⁷⁷ That is, if hunting is to continue, hunters must carry out their activities in a manner that is acceptable to the public.²⁷⁸ Cahoone (2009) systematised the process by which recreational hunting has become contested. According to this framework, hunting is often condemned as: a) the killing of animals for leisure, entertainment, or sport; b) by methods that causes excessive animal suffering; c) whose only practical benefit (i.e., consumption) can be achieved without killing animals; d) thereby violating obligations to avoid inflicting 'unnecessary' suffering.²⁷⁹

Animal welfare science is closely linked with the animal welfare ethic.²⁸⁰ Animal welfare science applies scientific methods to investigate the types of harms and benefits that animals can experience in different circumstances, how these harms compare to those resulting from alternative actions, and how effective attempts to mitigate them have been.²⁸¹⁻²⁸³ The information produced by animal welfare science can then be used to make decisions about which actions are morally and ethically acceptable. However, animal welfare science itself is ethically neutral and does not address the necessity of harm because this is an ethical, rather than a scientific question.²⁸⁴

Nevertheless, animal welfare scientists often choose research questions with the goal of avoiding or reducing animal suffering, which reflects the influence of the animal welfare ethic on the discipline.²⁸⁵

Following Soulsbury et al. (2020)²⁸⁶, this submission will draw upon the definition provided by the World Organisation for Animal Health (hereafter, 'OIE'), which defines animal welfare as "how an animal is coping with the conditions in which it lives".²⁸⁷ This definition states that "an animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress".

2.2 Wild animal welfare

2.2.1 What is wild animal welfare?

Human actions, both intended and unintended, can have a direct or indirect impact on the welfare of wild animals.²⁸⁸⁻²⁸⁹ The majority of anthropogenic animal welfare issues in wild individuals or populations stem from two (2) sources: 1) unintentional adverse impacts that occur as a result of planned actions or; 2) harmful outcomes of alterations to the environment, such as habitat loss, caused deliberately or unintentionally.²⁹⁰ Anthropogenic changes in ecosystems, such as habitat fragmentation or climate change²⁹¹, can have significant but often unnoticed impacts on the welfare of wild animals (e.g., by altering their food sources or habitats).²⁹² The latter will be discussed in the relevant subsection of this document.

Although recreational hunting in Australia has a long history, there is a lack of quantitative data on hunting in Australia.²⁹³ Despite this, scientific reviews have consistently highlighted the importance of upholding standards of animal welfare in wildlife management.²⁹⁴⁻²⁹⁷ The methods and techniques used for recreational hunting are likely to have substantial animal welfare impacts.²⁹⁸⁻³⁰² Recreational hunting is linked to numerous adverse animal welfare outcomes, with non-fatal wounding being a significant concern.³⁰³⁻³⁰⁴

In the last two (2) decades, there has been a notable increase in the emphasis on animal welfare in wildlife management.³⁰⁵⁻³⁰⁸ For example, public opinion supporting the idea of wild animal welfare can be seen in a survey where 75% of respondents who were interested in conservation, including both professionals and members of the general public, believed that it is our responsibility to consider the welfare of wild animals.³⁰⁹ However, a significant portion of the literature concerning wild animal welfare continues to remain concentrated on wildlife management.³¹⁰⁻³¹⁶

As society changes and values shift, hunting has come under increased scrutiny.³¹⁷ Though relatively few studies have assessed the animal welfare impacts of recreational hunting³¹⁸ and duck hunting is not as visible a form of animal cruelty as some other examples³¹⁹, public acceptance is lower than it has ever been.³²⁰ The majority of concerns relate to growing regard for animal welfare and the corresponding ethical understanding of the immorality of hunting for pleasure or entertainment.³²¹⁻³²² As McLeod (2007) explains, "whereas shooting ducks was once considered a 'natural' form of food provisioning, it is now increasingly viewed as 'unnatural,' unnecessary, and unethical".³²³ The following subsections will outline several key animal welfare concerns associated with the hunting of native water birds in SA.

2.3 Welfare issues in recreational hunting

There is a notable paradox inherent in the practice of recreational hunting, particularly as it relates to ethics and animal welfare: recreational hunters kill animals for the experience while declaring an intimate relationship with, or love for, the species whose members they kill.³²⁴⁻³²⁷ According to Causey (1989), 'the kill' constitutes a critical element that is "truly essential to the authentic hunting experience".³²⁸ Similarly, Ortega (1972) states that "one does not hunt in order to kill; on the contrary, one kills in order to have hunted".³²⁹

Hunting lacks the consent of all participants and involves the deliberate killing of target animals.³³⁰ Growing community concerns have emerged concerning the cruelty of many common hunting practices.³³¹ The argument asserting that hunting is unethical due to the suffering it inflicts assumes two (2) things: firstly, that we can

accurately determine the extent and manner in which an animal experiences suffering, and secondly, that we can logically deduce the immorality of causing suffering from the suffering itself.³³² The following subsections will briefly outline a number of key concerns associated with elements of the recreational hunting of native waterbirds in SA.

2.3.1 Shooting

The use of firearms is a widely employed tool in wildlife management for a variety of purposes, including for commercial, control, and hunting purposes.³³³ Hunting with firearms has occurred in Australia since colonial settlement.³³⁴⁻³³⁵ It remains particularly prevalent in the lethal control of species whose populations are considered "overabundant".³³⁶⁻³³⁸ Though there are significant concerns about the animal welfare outcomes associated with the use of firearms in recreational hunting³³⁹⁻³⁴¹, few studies have quantified the animal welfare outcomes associated with the use of firearms.³⁴² This subsection will briefly outline concerns associated with the shooting of native waterbirds in SA.

When an animal is struck by a bullet, the cause of death depends on the placement of the shot.³⁴³ Bullets kill animals through two (2) primary mechanisms: 1) by inducing trauma to the central nervous system (resulting in permanent unconsciousness)³⁴⁴ or; 2) by causing fatal haemorrhaging.³⁴⁵ If a bullet strikes major blood vessels or the heart, fatal haemorrhaging is likely to occur.³⁴⁶ If it hits vital parts of the brain, the animal will lose consciousness and experience heart and respiratory arrest.³⁴⁷ While bullets to the neck may cause significant damage to the spinal cord and result in insensibility³⁴⁸, this type of impact could lead to paralysis and the animal may remain conscious until death.³⁴⁹ Similarly, while other spinal cord injuries may cause incapacitation, they may not be fatal unless large blood vessels are also damaged. This may allow the animal to remain conscious for several minutes before death.³⁵⁰ The time it takes for the wounded animal to become immobile and appear unconscious, known as incapacitation, depends on the rate of haemorrhage.³⁵¹

Thus, when compared to other frequently employed wildlife management techniques, the process of selecting and standardising shooting methods is widely acknowledged to lack consistency.³⁵² This is because the selection and application of shooting methods are seldom based on evidence-based approaches.³⁵³ Such an approach is critical because human factors are profoundly important as shooter proficiency is involved in the use of firearms.³⁵⁴ Thus, the proficiency and the decisions of shooters has significant impacts on the welfare of animals.³⁵⁵

Hunting ducks in SA is only permitted by shotgun.³⁵⁶ However, it is not currently a requirement for recreational duck hunters in SA to demonstrate accurate shooting techniques.³⁵⁷ Though we are unaware of any similar surveys or studies conducted in SA, the results of a survey conducted by the Victorian Government are illuminating. It found that:

- 80% of licenced duck hunters could not reliably distinguish between permitted species and non-target species, including endangered species;
- A third of licenced duck hunters had any knowledge or awareness of wounding rates and;
- Only 1 in 10 licenced duck hunters had any knowledge or awareness about how to humanely kill wounded birds.³⁵⁸

Finally, though it is difficult to accurately assess the extent of animal welfare impacts in the context of shooting and only a handful of attempts have been made to do so³⁵⁹, management agencies often rely on procedural documents that prescribe ballistic inputs that are assumed to yield positive outcomes but have not been independently verified through testing.³⁶⁰ Thus, despite considerable public interest and suggested "best practices" for hunting to minimise adverse welfare outcomes, there is a distinct lack of scientific studies that quantify animal welfare aspects.³⁶¹ As it applies to the shooting of wildlife, animal welfare scrutiny is "rarely applied and regulation is more difficult to enforce".³⁶² This particularly applies to wounding rates.³⁶³⁻³⁶⁴

2.3.2 Wounding

The likelihood, rate, and severity of wounding from firearms is related to ballistics, accuracy and precision. The study of how projectiles, such as bullets, behave once they penetrate tissue is known as 'terminal' or 'wound' ballistics.³⁶⁵ Apart from intended shot placement and the amount of kinetic energy transferred to the animal, the extent of injuries caused by the bullet is determined by its design. Most bullets used in hunting expand upon impact.³⁶⁶ The extent and severity of damage caused by a bullet is also based upon the elasticity of the penetrated tissues. Permanent wounding will result if the energy stored in the tissue surpasses its elastic limit, leading to tissue rupture.³⁶⁷ Elastic tissues, such as muscle, skin, blood vessels, and lungs, have the capacity to absorb a considerable amount of energy discharged by a bullet and retract back toward the wound channel.³⁶⁸⁻³⁷⁰ In contrast, organs such as the liver, kidney, and brain are more prone to disrupt when hit by a penetrating projectile.³⁷¹⁻³⁷³ When the size of an organ or the victim's body is critically small, all tissues will be overstretched beyond the elastic limit, causing it to rupture.³⁷⁴

The process of reliably striking a target can be described by two (2) parallel and independent terms: 1) accuracy (i.e., how close a projectile hits in relation to the centre of a preferred target) and; 2) precision (i.e., the closeness of shots to each other even if they are not in the preferred target).³⁷⁵ Accuracy and precision both play a crucial role in shooting as they have, more than any other variable, a significant impact on animal welfare outcomes.³⁷⁶ A number of variables influence accuracy and precision.³⁷⁷ For example, higher levels of accuracy and precision are achievable from a stationary position rather than moving vessels, such as boats.³⁷⁸

The non-fatal wounding of animals is an inevitable consequence of any shooting programme, including recreational hunting.³⁷⁹⁻³⁸⁰ As detailed above, shotguns fire a cluster of pellets rather than a single bullet and, as such, they rely upon hitting vital organs to cause death.³⁸¹⁻³⁸² However, because pellets create open spaces in a cluster many ducks are hit but not killed. As a result, the RSPCA notes that wings and other body parts or organs may be impacted and cause significant injury but not death.³⁸³ Further, as "even the most accurate shooters cannot kill reliably", the RSPCA maintains that "large scale cruelty is inevitable".³⁸⁴ In line with its policy that opposes the hunting of any animal for sport³⁸⁵, the RSPCA is publicly opposed to recreational native waterbird hunting "because wounding is inevitable" and causes suffering, pain and distress.³⁸⁶ Though mortality due to wounding can occur shortly after sustaining an injury (i.e., within days or weeks), the impacts of injury can produce long-term effects.³⁸⁷

The primary causes of wounding are shooting at birds at long ranges, the use of suboptimal equipment and, more generally, a lack of hunter experience or expertise.³⁸⁸ From an animal welfare perspective, the escape of an injured animal is the most undesirable outcome because it may result in an unmeasurable and prolonged period of suffering.³⁸⁹ As such, the wounding of birds due to shooting has been highlighted for some time.³⁹⁰⁻³⁹¹ This matter is of utmost importance, not only due to the ethical and animal welfare implications of causing injury to animals, but also because it impacts population dynamics by lowering survival rates.³⁹²

Although investigations on water bird wounding losses were carried out in Australia from 1953 to 1982, limited current data exists on the matter.³⁹³ From 1972 to 1977, research conducted to investigate the impact of hunting on ducks in Victoria found that between 14-33% were injured but not retrieved.³⁹⁴ An x-ray examination of live ducks in Victoria between 1957 and 1973 revealed that between 6-19% had shotgun pellets lodged in their bodies as a result of duck hunting.³⁹⁵ According to recent estimates, as many as 10,000 birds are non-fatally injured each year during SA's open season.³⁹⁶⁻³⁹⁷

2.3.3 The use of dogs

Evidence from archaeology and anthropology indicates that the relationship between humans and canines gradually evolved over tens of thousands of years³⁹⁸⁻⁴⁰¹, giving rise to a set of interactive and mutually advantageous skills and abilities.⁴⁰²⁻⁴⁰³ A crucial aspect of this early partnership was the joint hunting endeavours that helped shape the social, anatomical, and cultural progress of both species.⁴⁰⁴⁻⁴⁰⁵ As indigenous peoples have in many parts of the world⁴⁰⁶⁻⁴⁰⁹, First Nations people in Australia have a long history of using canids during hunting.⁴¹⁰ Though dogs continue to be used as hunting tools in Australia, this is primarily for recreational rather than subsistence purposes.⁴¹¹⁻⁴¹²

In contrast to many other jobs that dogs may perform, hunting is a domain that is primarily carried out by canines who have been specifically bred over the course of centuries or even millennia to excel at this activity.⁴¹³⁻⁴¹⁴ Breeds developed for hunting have been carefully selected for their particular skill sets, which are tailored to enable successful hunts.⁴¹⁵ Dogs who do not demonstrate the desired behavioural traits may be culled⁴¹⁶⁻⁴¹⁷ or abandoned.⁴¹⁸ Hunting breeds are typically characterised by high levels of energy and intensity, and may continue to work despite experiencing severe illness or pain, which can make it difficult to discern when they are unwell or to determine the nature of the problem.⁴¹⁹ The use of dogs to hunt other species has therefore raised significant animal welfare concerns.⁴²⁰⁻⁴²¹ International surveys have found that ~39% of respondents identify the use of dogs while hunting as a factor that reduces animal welfare outcomes.⁴²²

Although hunting dogs are frequently exposed to firearms, they are not disproportionately represented in reports of gunshot injuries among canines, which suggests that intentional wounding is the most common cause.⁴²³⁻⁴²⁴ Dogs that have been shot may present with a range of conditions, ranging from acute, life-threatening injuries to incidental detection of metallic projectiles that were embedded in their tissues during prior incidents.⁴²⁵ The prognosis for such injuries can vary widely and depends on factors such as the affected tissues, the severity of the wound, and the extent of blood loss or organ dysfunction; wounds to the thoracic region are associated with higher fatality rates.⁴²⁶ In addition to the direct physical harm caused by gunshot wounds, further damage can result from corrosion of steel pellets that remain embedded in the tissues over time.⁴²⁷ Hunting dogs are also at a higher risk of exposure to infectious diseases due to their increased likelihood of coming into direct or indirect contact with wildlife reservoirs, being exposed to insect vectors, or being fed raw tissues.⁴²⁸ For example, hunting dogs are more likely to contract heartworm infections compared to companion dogs.⁴²⁹

In SA, dogs can be used to locate, chase and/or retrieve other animals. They cannot be used to attack or maim another animal.⁴³⁰ There are a number of other offences related to the use of dogs in hunting. For example, dogs used in hunting must wear registration tags per the *Dog and Cat Management Act 1995*.

2.3.4 Disturbance from hunters

As we have shown in subsection 2.3.2, duck hunting has impacts that extend beyond mortality.⁴³¹ Research has shown that anthropogenic disturbances have a significant impact on ducks in multiple ways. Human presence in natural areas can affect wildlife by disrupting: 1) their foraging and social behaviour⁴³²⁻⁴³⁴; 2) feeding⁴³⁵; 3) parent-offspring bonds⁴³⁶ and; 4) pair bonds.⁴³⁷ Disturbance from hunters can also cause animal welfare issues through fear and distress response in waterbirds.⁴³⁸

Despite ducks adapting to disturbances quickly, this is achieved through substantial modifications in their behaviour, which can have negative consequences on their ability to acquire adequate food.⁴³⁹ For example, flight is more “energetically expensive” than other forms of movement in waterbirds.⁴⁴⁰ When hunters disturb animals, the resulting additional energy expenditure necessitates an increase in food intake to recover the expended energy. However, the time required for additional feeding may also carry a survival cost, including a heightened predation risk and difficulty in obtaining or storing sufficient nutrients for migration.⁴⁴¹ This situation is particularly crucial for waterbirds that must fly long distances, such as the Grey Teal, which can fly over 2,000 km in a year.⁴⁴²

The presence and activity of hunters can also cause ducks to reduce their foraging activities, which may result in compromised animal welfare, including poor physical condition.⁴⁴³ This situation has been shown to decrease survival rates for migratory birds.⁴⁴⁴ As the RSPCA note, the alteration of natural movement patterns has far-reaching consequences on a species' ecology and can lead to adverse implications in their physiology, behaviour, management, and conservation.⁴⁴⁵ Adverse impacts can include: 1) the abandonment of nests or young birds due to the presence of hunters in areas not frequently attended by humans; 2) reduced feeding and resting due to disturbance; 3) temporary habitat loss due to abandonment of wetlands and; 4) increased energy usage as a result of prolonged flight after disturbance.⁴⁴⁶

The RSPCA reports that gunshots cause the highest levels of disturbance, leading to a doubling of the time that ducks spent flying (4%-7.9%) and a 30% increase in the distance they travelled. When hunters moved around during the hunting season, whether in boats or on foot, ducks tripled their flying distance during the nocturnal

period (0.6–1.9%), and their flight duration more than doubled.⁴⁴⁷ The results of these observations suggest that both lethal (direct) and non-lethal (indirect) hunter activities, which are known to disturb ducks, are the primary causes of the observed movement variations across the hunting season. It follows that the habitat of non-game species can also be disturbed during open seasons.⁴⁴⁸

2.3.5 Conclusion

Adopting welfare standards is the process of setting threshold levels for animal-based welfare measures that are considered desirable or acceptable.⁴⁴⁹ To set standards, appropriate animal welfare measures may be used. As it applies to hunting, such measures can include the frequency of non-fatal wounding⁴⁵⁰, the frequency of immediate insensibility⁴⁵¹, the frequency of exit wounds or the average flight distance.⁴⁵² However, assessing animal welfare outcomes utilising a binary acceptable/unacceptable rubric is subjective and requires value judgments.⁴⁵³ For example, while one person may find it acceptable for a shooting method to render 75% of test animals immediately insensible, another may desire 95% success.⁴⁵⁴ This disagreement can be resolved only by consulting with a variety of stakeholders and compromising to reach agreement on outcomes that are likely to improve the situation while remaining achievable.⁴⁵⁵

It is critical to acknowledge that evaluating the animal welfare impacts of hunting methods and either supporting or opposing those impacts are two distinct undertakings. Failing to measure the animal welfare outcomes of hunting techniques renders any efforts to morally defend their utilisation incomplete.⁴⁵⁶ Nevertheless, most ethical frameworks do not view traditionalism as a compelling justification for unfavourable animal welfare consequences.⁴⁵⁷ This reasoning has led to the discontinuation of traditional practices, such as the use of steel-jawed traps.⁴⁵⁸

2.4 Environmental impacts

2.4.1 Wetlands

Wetlands provide critical habitat for millions of waterbirds worldwide.⁴⁵⁹ However, freshwater ecosystems are among the most altered ecosystems on the planet.⁴⁶⁰⁻⁴⁶¹ In many areas, they are nearing their natural limits for human use and are exceeding their renewable supply.⁴⁶² Current predictions of climate change indicate that the risk of wetland loss and biodiversity degradation will increase.⁴⁶³⁻⁴⁶⁴

Waterbirds are dependent on wetland habitats.⁴⁶⁵ Waterbirds migrating across arid continental interiors tend to aggregate at a limited number of crucial wetland sites.⁴⁶⁶⁻⁴⁶⁷ These wetlands are part of larger flyway networks that support the global migration of waterbirds, which synchronise their movements and stopover sites to fulfil their annual lifecycle requirements as they travel between breeding and wintering grounds across different latitudes.⁴⁶⁸ Lakes and wetlands are essential components of continental flyways.⁴⁶⁹

2.4.2 Climate change

Australia's climate is inherently variable and this has a significant impact on the availability of habitat for waterbirds.⁴⁷⁰ Breeding opportunities are often provided by floods occurring in different parts of the continent.⁴⁷¹⁻⁴⁷² Although rainfall has been above average in many parts of Australia, it has not replenished all habitats to support sustainable waterbird populations.⁴⁷³ Additionally, water is often stored and prevented from entering creeks, streams and wetlands, further reducing available habitat.⁴⁷⁴

The decline of freshwater biodiversity across the globe is largely attributed to the impacts of water resource developments, such as dams, water diversions, and land use changes affecting floodplains and wetlands.⁴⁷⁵⁻⁴⁷⁶

Climate change is exacerbating this issue by causing reductions in rainfall and runoff, increased evaporation, and altered flow and flooding patterns, leading to further loss of biodiversity.⁴⁷⁷⁻⁴⁷⁸ The global drying of inland wetlands also raises concerns about the maintenance of flyway connectivity, particularly in arid and semi-arid regions.⁴⁷⁹ As some waterbird populations rely on a small number of important migratory stopovers, loss of individual wetlands can significantly alter resource abundance and distribution.⁴⁸⁰ The further drying of such wetlands has the potential to impact long-term population dynamics as carry-over effects driven by deteriorating migratory habitats can reduce the rate at which waterbirds survive.⁴⁸¹⁻⁴⁸²

Although climate outlooks suggest some areas of Australia may experience above or below median rainfall due to climate change, Victoria has equal chances of above or below median rainfall.⁴⁸³ Over the past 22 years, rainfall in Victoria has been below average and has declined by ~10% during cool months (i.e., April - October).⁴⁸⁴ The latter is particularly significant as it coincides with the peak streamflow period in most catchment areas, and cool-season rainfall is more efficient in generating runoff than warm-season rainfall. Runoff is essential in creating and maintaining waterbird habitat because it influences the availability of water and sustains the health of river systems.⁴⁸⁵ Current climate projections suggest that further declines in cool season rainfall and longer drought periods will occur in Australia.⁴⁸⁶ The RSPCA argues that such an outlook implies that hunting will not be sustainable into the future.⁴⁸⁷⁻⁴⁸⁸

2.4.3 Biodiversity loss

Worldwide, the loss or decline of biological diversity ('biodiversity') has been recognised as one of the most pressing environmental problems.⁴⁸⁹ The world's biodiversity is impacted by increasing extinction rates⁴⁹⁰⁻⁴⁹¹, with human behaviour being the principal driver.⁴⁹²⁻⁴⁹⁵ Such events are particularly impacting freshwater ecosystems.⁴⁹⁶ A number of factors are driving this decline, including water development, pollution, and climate change.⁴⁹⁷⁻⁴⁹⁸ Monitoring long-term environmental change is therefore critical.⁴⁹⁹

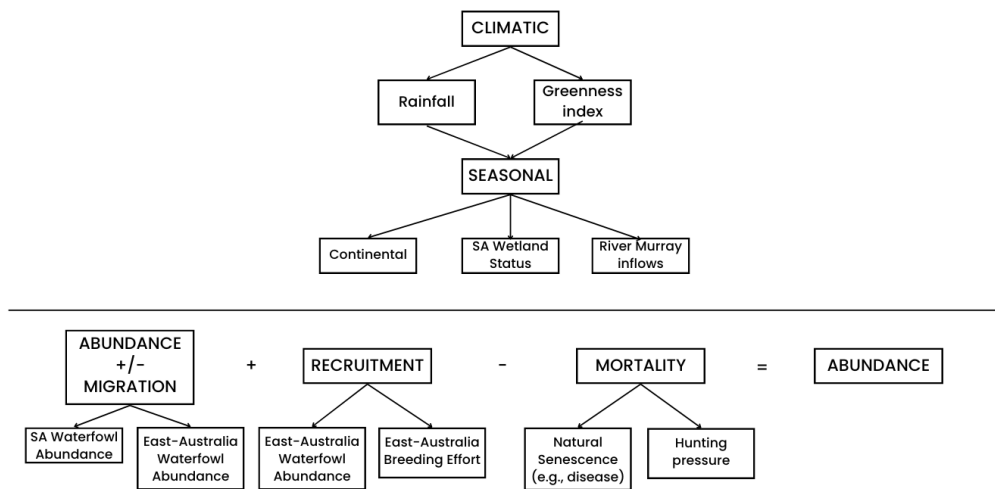
The issues outlined above are particularly pronounced in Australia as we have the worst record of extinctions in the world.⁵⁰⁰⁻⁵⁰¹ Currently, there are more than 1,700 threatened species and ecological communities in Australia.⁵⁰² Though national legislation lists the species known to be extinct, the actual figure is considered by experts to be higher.⁵⁰³ Nationally, approximately 200 plant and animal species in SA are listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* (hereafter, 'the EPBCA').⁵⁰⁴ While over 1,000 native species are currently listed as threatened under SA's NPW Act, the Department notes that "a number of species are also considered threatened on a regional level".⁵⁰⁵ Projections suggest that between one and two species will continue to face extinction each decade.⁵⁰⁶ While reducing or minimising the rate of extinctions has become one of the most important yet challenging contemporary issues, experts believe that if appropriate policy and management regimes were developed and implemented⁵⁰⁷, many of Australia's recent extinctions could have been prevented.⁵⁰⁸

The implementation of regulatory systems has stopped numerous wild animal populations from the brink of extinction, principally by overseeing hunting and trapping techniques, as well as restricting the number of participants and the quantities of animals taken.⁵⁰⁹ Thus, though some have argued that such regulation "saved" wild animals⁵¹⁰⁻⁵¹¹, others have critiqued this conclusion as misrepresentation. For example, Treves et al. (2018) explain that "hunting never directly saves the targeted animal".⁵¹² Instead, hunting alone can only indirectly protect individual animals.⁵¹³ Others have identified the restrictions imposed on hunters as important factors mitigating the risk of extinction.⁵¹⁴

2.4.4 Bird abundance

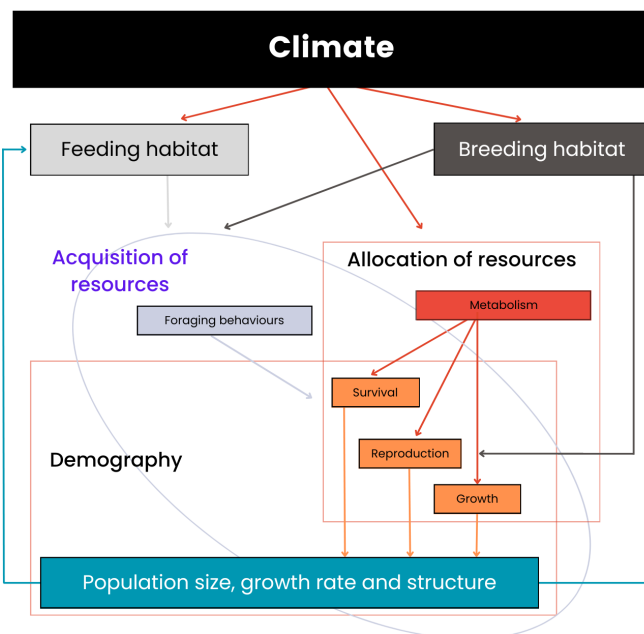
Global waterbird populations are in decline⁵¹⁵, with varying estimates ranging from 38%⁵¹⁶ to 55% of species affected.⁵¹⁷ Furthermore, 17.6% of all waterbird species are currently Red Listed as "vulnerable" or worse by the International Union for Conservation of Nature (hereafter, 'IUCN').⁵¹⁸ This decline is a result of the degradation of wetland ecosystems worldwide⁵¹⁹⁻⁵²⁰, driven primarily by factors such as habitat loss⁵²¹, land-use changes⁵²², water resource development⁵²³⁻⁵²⁵, and other human-induced changes⁵²⁶, including climate change.⁵²⁷ Waterbird populations in eastern Australia have been declining for the past thirty-five (35) years.⁵²⁸ The widespread degradation of inland wetlands has contributed to the severe decline of many species.⁵²⁹

Fig. 6: factors influence waterfowl species and populations⁵³⁰



Waterbirds are recognised as a useful bioindicator group for monitoring changes to freshwater ecosystems.⁵³¹⁻⁵³² This is because they are obligate aquatic organisms who are responsive to natural and anthropogenic changes in wetland ecosystems.⁵³³⁻⁵³⁴ For these reasons, waterbirds are frequently regarded as a prominent group for monitoring alterations in freshwater ecosystems and are incorporated as a factor for proposing wetlands of global significance under the Ramsar Convention, as well as for Important Bird and Biodiversity Area designations.⁵³⁵

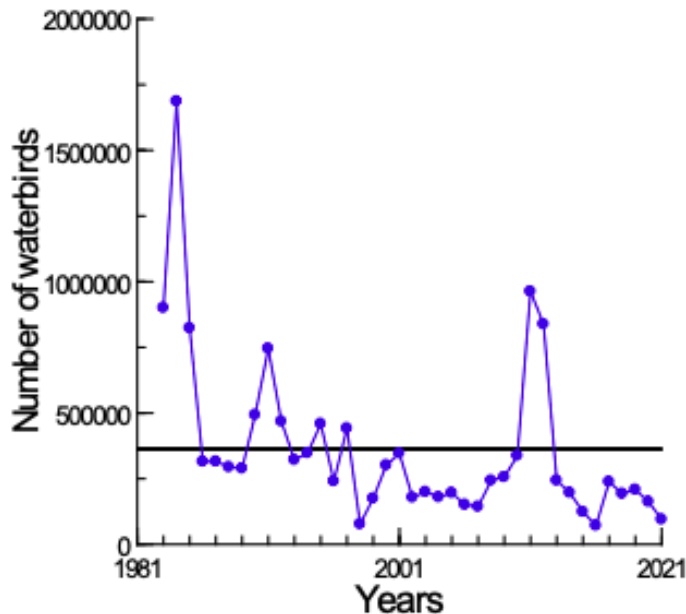
Fig. 7: climatic conditions impacting bird abundance and demographics⁵³⁶



Historical reports compiled by the Department have demonstrated significant declines in South Australian duck numbers.⁵³⁷ The SA Government consults several surveys when setting conditions for open seasons. These include: 1) the Eastern Australian Waterbird Survey (hereafter, 'the EAWS'); 2) the Wetlands and Waterfowl Surveys (hereafter, 'the W&WS') and; 3) the SA Aerial Surveys (hereafter, 'the SAAS').⁵³⁸ Of these, the most amount of data is available relating to the EAWS.

The EAWS is run by the Centre for Ecosystem Science (hereafter, 'the CES') at University of New South Wales (hereafter, 'UNSW').⁵³⁹ It is funded by the NSW Office of Environment and Heritage (hereafter, 'NSW OEH'), with additional funding provided by the South Australian, Queensland, Victorian, and Federal Governments.⁵⁴⁰ Every year in October, up to 2,000 wetlands in eastern Australia are surveyed from the air to count waterbirds. The aerial surveys collect abundance indices for all waterbird species on surveyed wetlands. The surveys cover a sample area of 2,697,000 km², divided into ten (10) 30km-wide survey bands that intersect Queensland, New South Wales, Victoria, and South Australia.⁵⁴¹⁻⁵⁴⁴ It is one of the world's longest-running bird counts.⁵⁴⁵

Fig. 8: changes over time in the total abundance of waterbirds (1981-2021)⁵⁴⁶



Though the EAWS is intended to provide information on the ecosystem health of wetlands and rivers⁵⁴⁷, it has recorded long-term declines in the abundance of many game species of waterbird.⁵⁴⁸ For example, the 2021 EAWS annual summary report shows a long-term decline (1983-2021) in the abundance of Pacific black ducks, Australasian shovelers, grey teals, mountain ducks, and Australian wood ducks.⁵⁴⁹ As Fig. 8 shows, the total abundance is well below the average (indicated by the horizontal line). In total, the EAWS has recorded declines of approximately 70% since the survey began in 1983.⁵⁵⁰

3. Conclusion

Animal Liberation appreciates the opportunity to provide the Committee with this response to its inquiry into Victoria's recreational native bird hunting arrangements. This document has provided the Committee with a comprehensive account demonstrating why the recreational hunting of waterbirds in Victoria should be urgently banned. The practice of hunting ducks for recreation is not a necessary or sustainable means of wildlife management, and can lead to the unnecessary suffering and death of animals. Additionally, the disruption of natural habitats and the spread of disease associated with hunting can have lasting ecological consequences.

There are viable alternative methods of wildlife management that are more humane, effective, and sustainable. These include non-lethal options such as habitat conservation, population monitoring, and wildlife education programs. By adopting these approaches, we can better protect the natural environment and preserve the diverse range of species that call SA home.

Overall, the banning of recreational hunting of ducks in SA is a necessary step towards creating a more compassionate and environmentally responsible society. We urge the government to consider these factors and take decisive action to end this harmful practice.

Appendices

The following Appendices contain:

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Table 1: relevant provisions in State and Commonwealth wildlife protection legislation

Statute	Provisions
<p>National Parks and Wildlife Act 1972</p>	<p><u>Section 5</u>: defines 'take' as including the act of hunting;</p> <p><u>Section 51(1)</u>: cannot take a protected animal;</p> <p><u>Section 52</u>: empowers the Minister to declare an open season for the taking of protected animals;</p> <p><u>Section 60</u>: prohibits the possession or control of an animal who has been illegally taken or otherwise acquired;</p> <p><u>Section 66</u>: enables the restriction or prohibition of firearms or devices for the taking of specific species or the taking of animals in general;</p> <p><u>Section 67</u>: enables the dismantling or removal of any device by which animals are illegally or likely to be illegally taken;</p> <p><u>Section 68(1)</u>: cannot engage in or permit the interference with or the harassment of protected animals;</p> <p><u>Section 68(2)</u>: empowers the Minister to grant a permit to engage in activities that contravene Section 68(1);</p> <p><u>Section 68(3)</u>: provides a defence to an offence if the defendant acted in the best interests of the animal or "acted reasonably" in order to protect people or property;</p> <p><u>Section 68A</u>: provides for the provision of hunting permits;</p> <p><u>Section 68A(5)</u>: removes requirement for a hunting permit if animals endanger human life, an animal is causing damage to property or the act is carried out in accordance with any other permit obtained under the Act;</p> <p><u>Section 68B</u>: prohibits the unlawful entry on land for the purpose of hunting unless written permission is obtained from the landholder.</p> <p><u>Section 69(3)</u>: subjects permits granted under the Act to restrictions and/or conditions.</p>
<p>National Parks and Wildlife Regulations 2011</p>	<p><u>Section 4</u>: prohibits the use of a protected animal for the purposes of hunting, whether as a decoy or otherwise;</p> <p><u>Section 6</u>: prohibits the damaging of trees or nests for the purposes of hunting, whether they are a protected animal or not;</p> <p><u>Section 7</u>: requires duck hunters to pass a Waterfowl Identification Test ("WIT");</p> <p><u>Section 8</u>: provides a range of restrictions applicable to the declaration of an open season under section 52 the NPWA;</p> <p><u>Section 8(1)(a)</u>: prohibits hunting from watercraft or other vessel while it is operational;</p> <p><u>Section 8(1)(b)</u>: prohibits the use of an engine-driven vessel, watercraft, aircraft, gas gun, bird scarer or any other type of device for the purpose of rousing protected species so they can be hunted;</p>

	<p><u>Section 8(1)(c)</u>: prohibits the use of grain or other material to entice protected species into an area so they can be hunted;</p> <p><u>Section 8(1)(d)</u>: prohibits the use of certain firearms in hunting;</p> <p><u>Section 9</u>: requires permit holders to complete and lodge hunting surveys if required to do so by the Minister.¹</p>
<p><i>Animal Welfare Act 1985</i></p>	<p><u>Section 3</u>: defines 'harm' as "any form of damage, pain, suffering or distress (including unconsciousness), whether arising from injury, disease or any other condition;</p> <p><u>Section 3</u>: defines 'serious harm' as harm that endangers life, results in severe injury or disease that requires euthanasia or causes serious or protracted impairment;</p> <p><u>Section 13</u>: persons who ill treat an animal in a manner that deliberately or recklessly causes death or serious harm are guilty of an offence;</p> <p><u>Section 13(3)(g)</u>: incorporates the concept of 'unnecessary pain' to the ill treatment of animals;</p> <p><u>Part 5</u>: outlines enforcement responsibilities and duties, including those of inspectors;</p> <p><u>Section 43</u>: provision that does not render unlawful practices that are in accordance with a prescribed code of practice;</p> <p><u>Section 44</u>: provides for the creation of Regulations.</p>

¹ It is worth noting that, according to information released by the Department's Freedom of Information Unit, that these surveys have an annual return rate of between 5-20%.

Table 2: duck abundances relative to long-term averages (2020)²

Year	Grey teal	Chestnut teal	Black duck	Wood duck	Aust. shelduck	Aust. shoveler	Hardhead	Pink-eared duck
2020	4,845	1,656	2,797	375	6,478	134	809	178
Long-term average	44,316	3,856	2,780	795	4,769	1,663	5,076	4,384

Table 3: waterbird abundance relative to long-term averages (2020)³

		Grey teal	Chestnut teal	Black duck	Wood duck	Mountain duck	Blue-winged shoveller	Hard head	Pink-eared duck
SA W&WS	2020	4,845	1,656	2,797	375	6,478	134	809	178
	Average (2003-2020)	44,316	3,856	2,780	795	4,769	1,663	5,076	4,384
	2020 as % of average	11	43	101	47	136	8	16	4
EAWS	2020	30,208	909	10,688	9,035	2,429	267	12,844	24,850
	Average (1983-2020)	11,727	1,328	17,578	12,831	7,729	2,174	16,711	37,271
	2020 as % of average	27	68	61	70	31	12	77	67

² Conservation Sub-Committee. Duck and quail hunting. *The Birder* 2021, 257. 6-12.

³ Government of South Australia Department for Environment and Water (DEW). *Waterfowl. Environment and Climate Conditions and Forecast Conditions to Inform 2022 Duck and Quail Seasons Setting*. Available online: <https://cdp.environment.sa.gov.au/environment/docs/2022-Climate-Conditions-and-Forecast-Report.pdf> (accessed 15 May 2023).

Table 4: waterbird abundance relative to long-term averages (2021)⁴

		Grey teal	Chestnut teal	Black duck	Wood duck	Mountain duck	Blue-winged shoveller	Hard head	Pink-eared duck
SA W&WS	2021	7,715	1,900	3,748	1,172	4,331	73	1,815	2,873
	Average (2003-2021)	42,389	3,753	2,831	815	4,746	1,579	4,905	4,304
	2021 as % of average	18	51	132	144	91	5	37	67
EAWS	2021	24,744	54	5,658	7,008	2,479	57	3,176	6,528
	Average (1983-2021)	108,521	1,295	17,272	12,681	7,594	2,119	16,363	36,482
	2021 as % of average	23	4	33	55	33	3	19	18

⁴ Government of South Australia Department for Environment and Water (DEW). *Waterfowl. Environment and Climate Conditions and Forecast Conditions to Inform 2022 Duck and Quail Seasons Setting*. Available online: <https://cdn.environment.sa.gov.au/environment/docs/2022-Climate-Conditions-and-Forecast-Report.pdf> (accessed 15 May 2023).

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