Australian Deer Association (NSW)

submission on the Discussion Paper:

A New Biodiversity Strategy for New South Wales

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1. Executive Summary

The Australian Deer Association (NSW) appreciates the opportunity to comment on the Discussion Paper. Our members have a deep respect and true love of the Australian bush and contribute to biodiversity conservation through active management of wild deer and reducing numbers of vertebrate pests; we have comprehensive knowledge of the biology and behaviour of most introduced vertebrates in NSW. Our comments in this submission relate to the impacts of introduced species.

National parks in New South Wales face many threats to the sustainability and quality of their ecosystems. Pest animals are a major threat and cause widespread and substantial environmental, economic and social impacts. Unless current control programs are better supported by governments and the community the value of national parks in NSW will be significantly degraded by the presence of invasive species.

The Australian Deer Association (NSW) notes that the Discussion Paper makes reference to the fact that Australia is a signatory to the Convention on Biological Diversity yet refers to only one of the three objectives identified in Article 1 of the Convention – ‘the conservation of biological diversity’. The Discussion Paper makes no mention of the other two objectives ie. ‘the sustainable use of its components’ and ‘the fair and equitable sharing of benefits arising out of the utilisation of genetic resources’. We note that Australia has not only signed but also ‘ratified’ the Convention on Biological Diversity which signifies consent to be bound by treaty and that the treaty becomes legally binding on States.

Ground shooting compares favourably with the ‘ideal method’ for controlling vertebrate pests; it is effective, easy to use, provides acceptable safety for both users and others, is affordable, humane, and is species specific (McLeod 2007). Because invasive species continue to expand their range in NSW and even well-resourced NSW Government programs have been unable to achieve even modest reduction targets for a single species in a small area (Box 1) there is a mandate for the introduction of Conservation Hunting to assist in meeting the objectives and goals for biodiversity conservation in NSW national parks.

The Australian Deer Association (NSW) recommends:

1. that the new Biodiversity Strategy be seen by the citizens of NSW to be open, transparent and not neglecting its obligation to address all three objectives of the Convention on Biological Diversity and it is the expectation of the Australian Deer Association (NSW) that in line with Article 6 of the Convention, ‘sustainable use’ and ‘fair and equitable sharing’ are incorporated into the new Biodiversity Strategy, and

2. the necessary legislative changes to the National Parks and Wildlife Act and the Game and Feral Animal Control Act be undertaken to enable Conservation Hunting to be introduced into NSW national parks.
2. A New Biodiversity Strategy for NSW

Goals for a new strategy

2015 Targets
The Discussion Paper does not identify any specific targets for 2015. These should be explicitly stated and formulated to address the Threatening Processes identified on page 2 i.e. loss and fragmentation of habitat, invasive species, unsustainable levels of natural resource harvesting, and climate change etc.

20-Year Goal
As for the 2015 targets above the 20 year goals should be explicitly stated to enable measurement of progress against achievement. If the goal is vague or intangible, how will we know when we get there? The biodiversity strategy needs to specify (quantify) exactly what is meant by “successful efforts by the whole community”, “more widespread recovery”, “increasing connectivity” etc.

Efforts to control threats to biodiversity by invasive animals should be sustained (Braysher and Saunders 2002, Hart 2002) however competing inter- and intra-agency priorities can significantly effect whether this is possible. The annual budget allocation for invasive species management is never going to be adequate and will fluctuate annually as government agencies compete more or less (usually less) effectively with other high priority State service providers eg. health, transport and education. Box 1 demonstrates that even well resourced government control programs can fail to meet their objectives when control effort is applied sporadically.

100 Year Vision
As stated in the Discussion Paper the 100 year vision is focused on just one threatening process, climate change, suggesting that other threatening process such as fragmentation and loss of habitat, pollution, invasive species etc. do not. The 100 year vision should also include a statement on desired outcomes for the other threatening processes as well.
**Box 1: Failure of the Deer Management Program for Royal National Park**

The primary long term objective of the deer management program for Royal National Park is to reduce the number of Rusa Deer to a total of fewer than 1000 animals \(^5\). The key performance measure for the 2005-2008 phase of the program was a net reduction in deer numbers. In order to achieve a net reduction in population, a minimum of 300 animals per annum needed to be removed from Royal National Park \(^5\).

The results in the table below show that even well-resourced, ‘professional’ programs run by government agencies such as the NSW Department of Environment and Climate Change (DECC) that are aimed at controlling a single species in a relatively small area such as Royal National Park can fail to meet the desired objectives.

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<tr>
<td>No. Operational Rights</td>
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<tr>
<td>Animals Removed</td>
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<td>Total Cost</td>
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<td>Establishment Costs</td>
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<td>Research Contributions</td>
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<td>Salary Costs</td>
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<td>Contract Fees</td>
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<td>Operations</td>
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<tr>
<td>Consumption</td>
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<tr>
<td>Firearms</td>
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<td>Reported cost</td>
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This example provides a compelling case for government agencies and other decision makers to set aside their traditional anti-hunting ideologies and genuinely engage volunteer conservation hunting groups which can provide expert knowledge, skilled personnel (free of charge) and most importantly sustained effort to assist in management programs to achieve desired biodiversity and conservation outcomes. This is especially important when dealing with the added challenges of managing multiple invasive species across vast areas such as the DECC’s terrestrial public reserve system which comprises nearly 6.7 million hectares or 8.3% of NSW.
Guiding Principles for Biodiversity Conservation

Precautionary Principle
The Precautionary Principle is a useful tool in biodiversity conservation however there is potential for its misuse. Decision making authority is often vested in the hands of government appointed advisory committees made up of ‘experts’ and, while committee members may be highly qualified, they are nevertheless subject to expert frailties, bias and over confidence (Burgman 2004).

Given the potential for inappropriate application (either by design or ignorance) any consideration for application of the Precautionary Principle should include widespread input from relevant government, non-government and community stakeholder groups.

Importantly, the Precautionary Principle must never be used as an excuse to ignore evidence contradictory to ‘the party line’ of any influential minority stakeholder group(s).

There is at least one case where application of the Precautionary Principle by a NSW scientific advisory committee has been challenged by one of this state’s most experienced and internationally recognised wildlife biologists and debated at a national forum of professional wildlife biologists and managers (Parker and English 2004).

Establishment of a comprehensive, adequate and representative reserve system
The NSW reserve system should be comprehensive, adequate and representative however it is essential that reserve system must be monitored and effectively managed using the principles of adaptive management based on best available scientific evidence.

There is widespread criticism that the public reserve system is being ‘locked up’ and left (Commonwealth of Australia 2007). This ‘lock it up and leave it’ approach is not an acceptable practice for conserving biodiversity.

Implementation, Monitoring and Evaluation
Implementation of the Biodiversity Strategy objectives should be with regard to social, economic plus environmental factors in line with standard triple bottom line reporting adopted by government agencies.

With expected greater participation of community groups (Objective 6.3) it is appropriate that those community groups be invited to review and comment on a draft report before it is finalised. This would reduce the likelihood of final reports becoming politicised.

The implementation of plans to manage invasive species may well involve government agencies other than Department of Environment and Climate Change (DECC) and Department of Primary Industries (DPI) e.g Game Council NSW, Department of Lands, Forests NSW. Therefore, preparation of the strategy implementation reports should be a collaborative inter-agency effort and not be undertaken exclusively by DECC and DPI.
Strategy Fundamentals

Improved Decision Making

Regional Programs and Priorities
Decentralisation of decision making from ‘head office’ to regional offices for all government agencies involved in the final Biodiversity Strategy would help to improve both the quality and timeliness of implementing decisions. Regional managers are likely to better informed about their local issues and better able to engage local community groups and landholders.

An Innovative Regulatory Environment
One of the greatest impediments to the implementation of innovative biodiversity conservation initiatives is the existing legislative and regulatory constraints. For example, the National Parks and Wildlife Act 1974 currently does not permit Conservation Hunting activities within national parks; similarly, the Game and Feral Animal Control Act 2002

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**Box 2: Conservation Hunting: A Model for Protecting Biodiversity in NSW**

Recreational hunting and fishing are significant sources of conservation funding in developed and in some developing countries. Despite strong differences of opinion that may exist regarding the ethics of hunting and fishing, there is a growing acceptance that these activities and organisations can be forces for conservation.

The New South Wales Government’s statutory authority, Game Council NSW regulates and licenses one of the most stringent licensed hunting regimes in the world which includes accreditation in safety, animal welfare, hunting and the law, and ethics and conservation.

Conservation Hunting benefits the environment, agriculture, and the economy of NSW as well as providing invaluable data and scientific samples for projects that could not be obtained in any other way.

Volunteer Conservation Hunters are involved in a number of research projects including providing samples for monitoring for the deadly avian influenza in native ducks, Barmah Forest virus on the NSW north coast, and assisting the Sydney Catchment Authority’s pathogens monitoring program by taking samples from deer caught near the catchment.

Licensed hunters have removed thousands of feral goats, pigs, rabbits, goats and foxes on drought-hit farms in NSW at no cost to landholders. The numbers of feral animals removed by Conservation Hunters are increasing at an accelerated rate.

The success of Conservation Hunting in State Forests of New South Wales provides a compelling case for expansion of the program to include the national park public reserve system.

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does not permit Conservation Hunting in national parks. Appropriate amendment of these Acts would potentially enable the benefits of Conservation Hunting in declared state forests (see Box 2) to be extended to NSW national parks.

**Ongoing Commitment to Traditional Conservation Programs**

**The Reserve System**

The Discussion Paper asserts that “the central role of conservation reserves in implementing the objectives of the Convention on Biological Diversity is internationally accepted”.

With this we do not disagree, however we are extremely concerned that the Discussion Paper refers to ‘conservation of biological diversity’ yet avoids any reference whatsoever to the other objectives of the Convention on Biological Diversity (CBD) namely ‘the sustainable use of its components’ and ‘the fair and equitable sharing of benefits arising out of the utilization of genetic resources’.

The Discussion Paper confirms that Australia is a signatory to the Convention and in doing so the Parties have committed themselves to undertaking national and international measures aimed at achieving its three objectives:

1. the conservation of biological diversity;
2. the sustainable use of the components of biodiversity; and
3. the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

To ensure that the new Biodiversity Strategy is seen by the citizens of NSW to be open, transparent and not neglecting its obligation to address all three objectives of the Convention it is the expectation of the Australian Deer Association (NSW) that ‘sustainable use’ and ‘fair and equitable sharing’ are also comprehensively addressed and a range of appropriate objectives prepared.

**Objectives**

As mentioned in the previous section, the Discussion Paper lists objectives for only one of the three objectives of the Convention on Biological Diversity i.e. conservation of biological diversity.

If the new Biodiversity Strategy is to be the blueprint to optimise the conservation of biodiversity in NSW it is essential that it includes the two missing objectives of the Convention on Biological Diversity i.e. ‘sustainable use of the components of biodiversity’ and ‘fair and equitable sharing of benefits’. It would then be necessary to develop a similarly comprehensive range of specific objectives for ‘sustainable use’ and ‘fair and equitable sharing of benefits’ as has been prepared for conservation of biological diversity.

**4. Knowledge and Information**

The Australian Deer Association (NSW) is aware of numerous reports in the literature identifying the need for improvement in knowledge, information sharing and communication between agencies and we support reforms to the Natural Resource
Monitoring process that seek to improve the flow of information and quality of decision making.

We identify and suggest the following specific areas for improvement:

- knowledge of the ecological effects of pest control which will remain unreliable until study designs include treatment and non-treatment areas, replication, randomisation, and monitoring of changes in the abundance of both pests and resources (Reddiex 2006).

- lists of threatened species which may not be sufficiently reliable to form the basis for reporting on the state of the environment; are of limited use in distinguishing between levels of threat and may not be a reliable guide for the allocation of scarce conservation resources (Burgman 2002).

- inter-agency communication and co-operation for example between Department of Environment and Climate Change and Game Council NSW.

- recognition and acceptance by Department of Environment and Climate Change of the widespread literature supporting the positive role of Conservation Hunting in biodiversity conservation. For example, the 2002 report by English and Chapple on the management of feral animals by the National Parks and Wildlife Service stated that “Hunting has the potential to assist with conservation objectives, yet is rarely promoted as a conservation tool...” and the 2008 IUCN report Building Biodiversity Business states that “Despite strong differences of opinion that continue to exist between and within conservation organisations regarding the ethics of recreational hunting and fishing, there is growing acceptance that these industries and organisations can be positive forces for conservation.” (Bishop J 2008).

5. Invasive Species

The Australian Deer Association (NSW) believes there is room for substantial improvement in the prioritisation of pest management efforts by DECC.

For example, we find it difficult to understand how on one hand the 2006 DECC report ‘Protecting our National Parks from Pests and Weeds’ can state that “... NPWS is managing to reduce or stabilise the problem across the majority of its estate in NSW. In the overwhelming majority of the NSW park system, management is effectively containing or reducing the threat.” (DECC 2006) when recent draft regional pest management strategies indicate that invasive animals are widespread and are high priority for control plans:

- the Sydney South Region pest management strategy indicates there are established widespread populations of foxes in the region and that the fox, goats, pigs, rabbits and wild dogs as critical pest animal control priority (DECC 2007a);

- the Snowy Mountains Region pest management strategy indicates there are established widespread populations of foxes and rabbits in all 28 reserves within the region (DECC 2007b), and

- the National Parks Association of NSW states that invasive species are a growing threat to native diversity (National Parks Association of NSW 2007).
Similarly the systematic pest animal surveys by West and Saunders show that a number of invasive species have increased their range and density between 2002 and 2004/05:

- **Feral Pigs** have increased their total range from 61% to 63% of NSW and more areas are classified as containing a high density of animals than in 2002;
- **Dingoes and Wild Dogs** have increased their range from 25% to 30% and increased across all density classes;
- **Feral Goats** have increased their total range from 37% to 38% and remain abundant throughout much of the State; and
- **Rabbits** have increased their total range from 69% to 70.9%.

(West and Saunders 2007).

Successful control of pest animal populations requires sustained effort (Hart and Bomford 2006) however as shown in Box 1 sustained sufficient effort is rarely achieved by government agencies alone. In light of the number of species, populations and ecological communities threatened by terrestrial invasive species (Figure 5 in Discussion Paper) it is critical that Conservation Hunting programs be given urgent consideration for implementation in national parks in NSW.

Broad-scale ground shooting compares favourably with the ‘ideal method’ for controlling vertebrate pests - it is effective, easy to use, provides acceptable safety for both users and others, is affordable, humane, and is species specific:

<table>
<thead>
<tr>
<th>Method</th>
<th>Effectiveness</th>
<th>Ease of use</th>
<th>User safety</th>
<th>Affordability</th>
<th>Humane Ass</th>
<th>Species specificity</th>
<th>Environmental safety</th>
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</thead>
<tbody>
<tr>
<td>Poison baiting - acute toxins</td>
<td>High</td>
<td>Medium</td>
<td>Acceptable</td>
<td>High</td>
<td>Acceptable</td>
<td>Medium</td>
<td>Medium</td>
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<tr>
<td>Poison baiting - chronic toxins</td>
<td>High</td>
<td>Medium</td>
<td>Acceptable</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
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<tr>
<td>Shooting</td>
<td>Acceptable</td>
<td>Low</td>
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<td>High</td>
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<td>Medium</td>
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<tr>
<td>Trapping</td>
<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
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<td>Low</td>
<td>Acceptable</td>
<td>High</td>
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<tr>
<td>VVRC</td>
<td>Unknown</td>
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<td>Unknown</td>
<td>High</td>
<td>Medium</td>
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<td>High</td>
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<td>Chemical repellents</td>
<td>Acceptable</td>
<td>Medium</td>
<td>Acceptable</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
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<tr>
<td>Vernal and auditory repellents</td>
<td>Low</td>
<td>Acceptable</td>
<td>High</td>
<td>Acceptable</td>
<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
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<tr>
<td>Ultrasonic repellents</td>
<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
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<tr>
<td>Biological control</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Acceptable</td>
<td>Low</td>
<td>Acceptable</td>
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<tr>
<td>Participation</td>
<td>Medium</td>
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<td>Low</td>
<td>Medium</td>
<td>Acceptable</td>
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<td>Acceptable</td>
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<tr>
<td>Eradication</td>
<td>High</td>
<td>Acceptable</td>
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<td>Eradication</td>
<td>Medium</td>
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</table>

*Only if the cost of labour is not included, otherwise the method is Acceptable.

*The use of vector control that cause pain and suffering would reduce the humaneness of VVRC to Low.

*Initial control of pest rabbits using the biological control agent rabbit haemorrhagic disease virus and myxoma virus were highly effective, but factors such as the increasing prevalence of lower virulence strains and host immunity have reduced their effectiveness.

*Evolution can be highly cost-effective when used in small areas for the protection of highly valued resources.

(McLeod 2007)

Hunting organisations have made many important contributions to pest animal control efforts. Victorian hunters from Field and Game Australia participated in a fox bounty trial that destroyed more than 198,000 foxes in just over twelve months, and members of the Sporting Shooters Association of Australia culled more than 25,000 wild goats in the Flinders Ranges since 1992 (Commonwealth of Australia 2005).
6. Recommendations

The recommendations from three Commonwealth enquiries and reports plus recommendations from other independent experts provide a clear mandate for introducing Conservation Hunting programs to control vertebrate pest species in NSW national parks.

Conservation Hunters, accredited and trained through the Game Council NSW have proven to be effective in controlling pest animals in NSW state forests. There is no reason why the same results cannot be achieved in NSW national parks and achieve State Plan Priority 4 outcomes of a reduction in the impact of invasive species by 2015.

Removing the legislative barriers to enable Conservation Hunting in NSW national parks would bring about not only ecological benefits but also economic benefits through reducing the labour costs of pest control programs.

7. References


