

INQUIRY INTO THE IMPACT ON AGRICULTURE OF PEST ANIMALS

SUBMISSION BY THE TASMANIAN GAME MANAGEMENT SERVICES UNIT

Secretary: 

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TASMANIAN REPRESENTATIVES
AGRICULTURE, FISHERIES
AND FORESTRY

Terms of Reference 1

To identify nationally significant pest animal issues and consider how existing Australian and State government processes can be better linked for more coordinated management of these issues across State boundaries.

The traditional approach to biodiversity conservation in Australia is now considered by many people to be too narrow in focus. Whilst this approach has resulted in the protection of many areas (for example, 1.8 million ha. in Tasmania alone) which are representative of various ecosystems, a vast proportion of the country is not protected in this way, and as such is subject to various environmental and economic stresses. The 'preservationist' approach to conservation has had its day and the 'management' approach is seen as the way of the future. One way of achieving this goal is to consider wildlife as having a value. When a value is placed on a species, an indirect value is placed on the habitat occupied by that species and an incentive to manage the habitat emerges.

Whether utilisation of wildlife can assist in conservation *per se* depends on whether the utilisation is sustainable in the long-term, the impact of that utilisation on non-target species and the impact that the target species has on the environment.

There can be both positive and negative impacts and the beneficial impacts of wildlife use tend to be subtle, and less tangible, than detrimental impacts that are more noticeable. In this context it is worth considering the impact of introduced species. It is generally accepted that any species not native to Australia is 'feral' and, by definition, must have a negative impact. However the dictionary definition of 'feral' is 'wild, untamed or living in a wild state'. In contrast, the word 'exotic' is defined as 'introduced from abroad'. Translating these words to wildlife means that even native species can be feral, but introduced species should be regarded as exotic. This is not merely a pedantic point, because it colours society's perception of what is a 'pest' (Brasher 1993).

There are many well-known examples of introduced species threatening native biota and the environment (Caughley *et al.* 1998, Olsen 1998). However, there are other introduced species that have not had any quantified impact on the environment. Rather, all of these species can act as enticements for landowners to manage their properties for other positive environmental and biodiversity aspects.

Economic use of wildlife hangs on the premise that those people responsible for its conservation must be able to generate an economic gain from it. This is particularly so on private land.

The owner of the private land has the right to dictate who should have access to the wildlife on that property, and to transfer that right to others as they choose. Therefore

any use of the property by non-owners can be the subject of a payment in return for access to the wildlife on the property. The landowner then has the discretion to use the payment for conservation outcomes.

The community is divided on the merits of commercial use of wildlife. Some sections are opposed to any use of wildlife on moral and emotional grounds. Other people worry that commercial use may compromise the conservation efforts directed towards that species. Yet other groups raise the issue of animal welfare. Finally there is the indigenous Australian views regarding harvesting of wild animals.

Some native species generate significant commercial returns. For example, Ramsay (1994) estimated the total value of the kangaroo industry was in the vicinity of \$100 million annually. Other native species such as emus, crocodiles, possums, wallabies, finches and parrots are also being investigated for their commercial potential (Anonymous 1998).

Some exotic species also generate economic returns. Wild goats are exploited for meat and as a source of does for the cashmere industry and return \$27 million annually (Ramsay 1994), whilst feral pigs may return \$200 million each year as a recreational hunting resource (Masion and Fleming 1998).

The values listed above are positive values of wildlife, meaning that they provide a benefit to society. Wildlife also cause many problems for people, and these can be considered negative values. To determine the true value of wildlife we need to determine the net value by subtracting the negative values from the positive values.

The challenge is to decide who, or what organisation, makes these assessments. Currently wildlife management in Australia, and particularly wildlife damage management, is fragmented between the States and the Commonwealth with mutual distrust and disrespect. I suggest that the current dysfunctional relationships provide the Commonwealth with an opportunity to provide national leadership in managing problems caused by wildlife. The mission of the Commonwealth in this regard should be to recognise that wildlife is a significant public resource, greatly valued by the Australian people. However, by its nature, wildlife is a highly dynamic and mobile resource that can cause damage to agriculture, pose risks to human health, and impact other natural resources.

Therefore the Commonwealth should, in my opinion, consider the establishment of a national organisation dedicated to improving human-wildlife relationships and resolving human-wildlife conflicts as a way of facilitating Commonwealth and State cooperation in relation to wildlife management. The mission of such an establishment would be to help create a situation where neither humans, or wildlife, have an adverse impact upon the other. Such an institution could be modelled on the Berryman Institute in the USA, with specific objectives similar to the Berryman Institute including:

- Increasing our knowledge of wildlife and human-wildlife interactions.
- Develop new techniques to reduce wildlife damage that are effective, cost-efficient, humane and socially acceptable.
- Enhance the positive values of wildlife.

- Disseminate information about wildlife damage management issues.
- Assist State and other Commonwealth agencies in managing Australia's natural resources.
- Promote communication amongst wildlife management professionals, and
- Create educational opportunities for current and future wildlife management professionals.

Terms of Reference 2

To consider the approaches to pest animal issues across all relevant jurisdictions.

In Australia, under the Constitution of the Commonwealth, the control of lands and the products of the land, including wildlife, resides with the individual States. In order to discharge their responsibilities to wildlife, each State has a fauna authority. These statutory authorities differ widely in their structure, philosophy and breadth of responsibility, but, in general, each authority includes research, management, education and law enforcement as core business.

Despite this breadth of purpose there are deficiencies in the total effort directed towards wildlife, because wildlife management does not have a high priority in government spending, and a considerable amount of university research depends on students whose prime aim is to secure a higher degree in a limited time. The reluctance, and inability, of many researchers to communicate their findings to the public is a chronic deficiency.

One of the difficulties with wildlife management in Australia is that the management of the resource as a concept and in practice is still not the same thing. Wildlife management in Australia to date has been largely legislative, primarily concerned with the protection of individual native animals from being killed, or the flawed notion of eradication of exotic animal populations. These are extreme views of a wildlife management spectrum with little common ground, but this deficiency has been seen as largely unimportant in the past. Significantly the Senate Inquiry into Wildlife Utilisation (Anonymous 1998) recommended that more emphasis should be on the management of private, rather than public, lands. In this context there is hope that a more pragmatic, common-sense attitude to wildlife management will prevail.

The management of the off-reserve areas is greatly improved by the provision of an effective wildlife extension service, financed and properly staffed, to assist landowners in developing practical strategies for wildlife management.

Whilst these services have existed for many years in agricultural agencies, their translation to wildlife agencies has been limited and slow. These activities are also limited by the paucity of applied wildlife management research in Australia, the very activities that produce the material with which extension workers operate.

Such an extension service has been available from the land-grant Universities in the United States for many years. However, in Australia this service is only being provided by the Tasmanian Game Management Services Unit, and to an increasing number of clients Australia-wide. The demand on the services of the Game

Management Services Unit is a clear reflection on the need for such advice and service.

Terms of Reference 3

Consider the adequacy of State government expenditure on pest animal control in the context of other conservation and natural resource management priorities.

The discipline of wildlife management has been practised around the world since the 1940's - indeed since Aldo Leopold published *A Sand Country Almanac* (1949). During that period there has a huge number of articles about threatened species, pests and interactions between wildlife, humans and their habitats. It is surprising to note that amongst this wealth of information is a relative lack of material regarding the economic analysis of wildlife management and control. Such a revelation is even more surprising today given the declining financial resources targeted at wildlife management and the torturous route by which finances are allocated to projects.

Any economic study of the damage caused by, or control of, wildlife is fundamental to an understanding of the species role in a primary production or environmental system. Scientifically designed studies to quantify the relationship between wildlife density and damage are necessary, so that land managers can assess management options and give priority to appropriate, cost-effective strategies. Unfortunately, whilst these studies are often mentioned, they are rarely performed (Olsen 1998).

There are no doubts that in some cases wildlife cause damage and must be controlled, and that involves a cost. A more positive way of viewing all wildlife is as a resource, from which some use, benefit, and economic return can be gained. But the full answer of what Australia's wildlife is worth cannot be provided because the economic costs and benefits of our wildlife (both native and exotic) have not been studied.

The perceptions of what wildlife species are labelled as pests, and what damage is caused by those species is just that - perceptions. Rarely is the relationship between wildlife numbers (or density) and damage either linear or quantified. As Olsen (1998) pointed out a pest is 'an animal that causes more harm than good to a valued resource' and 'what it boils down to is a valued judgement about whether an animal fits in with your view of the world or not'.

Therefore if people can decide whether a species is a pest, then it stands to reason that people can also decide if that same species can be a valued resource. Perhaps the time has come for Australian wildlife managers to catch up with their overseas colleagues and recognise that sustainable use of wildlife is a worthwhile, economic and viable conservation strategy. In this way a rationale debate can be constructed on developing natural resource management funding priorities.

Terms of Reference 4

Consider the scope of industry groups and R & D corporations to improve their response to landowner concerns about pest animals.

In many countries of the world, hunting and the subsequent use of game species for food and income is commonplace. An integral part of the management of these game species is the effort to ensure the conservation of the natural environment. This stewardship has benefits for all species living in that environment. The possibility of using an exotic species such as red deer to achieve similar results in Queensland is achieving some interest (McGhie 2004).

The first Red deer were introduced into Queensland in 1873, and since that date the deer have had to tolerate widespread clearing of the natural habitat for cropping and forestry, the poisoning of huge numbers of trees for cattle grazing and the extensive introductions of pasture grasses and legumes.

Despite the wide range of views and attitudes towards red deer by hunters, landowners and government, this volatile situation provides an opportunity for better management of the species for all sorts of positive outcomes.

There is an increasing number of landowners throughout the historic red deer range who are realising that 'farming deer at a distance' can have spin-offs for the improved management of their country and enhanced economic returns.

The flip side comes from some government agencies. For these agencies to commit to supporting the sustainable management of exotic species is counter to their creed of protection of native species. The irony is that whilst these agencies retain such traditional values, in the real world deer are being illegally moved to create new herds and trophy stags are being deliberately released for hunting purposes. On a more positive note there are agencies that are now realising that hunting can provide the incentives for enhanced land management.

The benefit derived from red deer is directly linked to the perception of herd quality. A perception of high herd quality translates to an increased effort to maintain that herd, and a key outcome of increased effort is improved habitat quality. For this reason the hunter and landowner group known as RIDGE (Research into Deer Genetics and Environment) has been encouraging landowners to manage wild red deer under Quality Deer Management principles, and the delivery of those principles is through the Property-based Game Management program.

A balloted hunting program for red deer was implemented by RIDGE in 1996, with the aim of developing a sustainable hunting system unique in Queensland. Since its inception this program has generated returns of over \$500,000 to landowners, which translates to \$12/ha. Additional income for landowners involved in the program. The total expenditure by RIDGE hunters through the community since 1996 is over \$2 million.

The logic is that if there is no habitat then there are no deer. Given the economic returns now available to landowners, there is an incentive to manage and conserve the

habitat. The RIDGE program is now receiving growing interest as a model for wild deer management in Queensland.

This example is consistent with the Sustainable Wildlife Enterprise trials being promoted by the RIRDC Wildlife and Rangelands Program (Wilson 2004), where landowners are being encouraged to take responsibility for wildlife, diversify enterprises and increase their incomes and long-term productivity.

Terms of Reference 5

Consider ways to promote community understanding of and involvement in pest animals and their management.

The landcare revolution and changing community attitudes to the management of wildlife, together with the mounting pressure to manage wildlife resources on an ecological and sustainable basis, created the climate for the introduction of the Property-based Game Management planning program.

The program commenced in 1995 as a result of initiatives of the Tasmanian Deer Advisory Committee and the Tasmanian Farmers and Graziers Association. The program provided the opportunity to plan the management of game and other wildlife on private land and enabled landowners to adopt a holistic perspective to the management of their properties and integrate wildlife management with the wider social, agricultural and ecological factors.

The program is designed to bring landowners, recreational hunters, wildlife-based industries and conservation interests together to seek solutions to wildlife management problems and to optimise community benefits from an integrated approach to wildlife management.

The management of game is regarded as a discreet section of the broader wildlife management. However, in some circumstances game needs to be integrated with other programs such as Land for Wildlife, Landcare, Bushcare and threatened species planning, and the whole package can be merged into a Whole Farm Plan. In this way a Property-based Game Management Plan can be considered as a Property-based *Wildlife* Management Plan.

Property-based wildlife management planning is the localised, integrated and planned response to the management of the wildlife resources. It is primarily based on individual private properties, but can be extended to cover a number of adjacent properties or regions and can be adapted to land under corporate or public management.

Currently the Property-based Wildlife Management Plans are designed and facilitated by staff from the Game Management Services Unit; a Unit of 5 people within the Tasmanian Department of Primary Industries, Water and Environment.

Property-based Wildlife Management Plans are designed as a cooperative effort between the landowner and other property stakeholders such as hunters, bushwalkers and conservationists. The Plan is not legally binding and the landowner may cancel

the Plan at any time. The landowner also retains the right to specify who may enter the property and may expel any individual or group as he sees fit.

The success of this approach to integrated wildlife management at the property level is reflected in there now being over 350 properties with Property-based Wildlife Management Plans in Tasmania alone. These properties cover an area in excess of 1.2 million hectares, and include enterprises as diverse as intensive agriculture, horticulture, and broad-scale pastoral operations.

Whilst the program began as an initiative for private property, there are now Property-based Wildlife Management Plans on extensive areas of State Forest (one Plan covers 57,000 ha of State Forest) and over 200,000 ha. of corporate owned land.

The Property-based Wildlife Management Planning program has also been successfully exported to mainland Australia, using the Tasmanian model. Currently there are Plans on over 600,000 ha of private land in New South Wales and Queensland for the better management of native and exotic species. There is even a Property-based Wildlife Management Plan on the resort island of Hamilton Island, Queensland, where native and exotic species have to be managed in a sensitive manner given the large number of international guests who visit the island.

The Property-based Wildlife Management program is continuing to expand. In this way it, and the staff of the Game Management Services Unit who facilitate the program, are demonstrating that when wildlife is given a positive value and there are wildlife extension specialists who can deliver a service there is a demand from private landowners for such a product.

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