

4. Community attitudes affecting management

Summary

The management of dingoes and other wild dogs is affected by community attitudes and perceptions. Opinions vary as to the pest status of dingoes and other wild dogs. Some primary producers view them simply as an unwanted pest to be removed from the environment while other sections of society view them as wildlife or icons to be conserved as far as possible. Public opinion influences not only the type of management strategies that are developed but also the type of control methods that may be deployed. Wider public attitudes rightly demand that the techniques used for wild dog control must be as humane as possible and expose non-target animals to minimal hazard. Management strategies that do not address or acknowledge broad community attitudes are susceptible to disruption or interference.

4.1 Community perceptions and attitudes

Community attitudes towards dingoes and other wild dogs are diverse and greatly affect management decisions. Dingoes and other wild dogs were condemned from the earliest time of European settlement in Australia as vicious killers of livestock and a threat to the domestic animals raised by struggling settlers. The dingo is also regarded by some people as a desirable species for recreational hunting (Allison and Coombes 1969) and was hunted by early settlers as a substitute for foxes (*Vulpes vulpes*) (Rolls 1984). The term 'dingo' came into usage as an insult when applied to a person. Later, the high profile of the dingo saw it being used as an advertising image (for example, Dingo Flour and Dingo Bitter beer).

With the increased urbanisation of Australia and a growing awareness of environmental issues, other attitudes towards dingoes have emerged. A recent demographically representative survey of 2000 Victorians of voting age showed that 79% of respondents classified

wild dogs as pests regardless of the respondents' background (Johnston and Marks 1997). The survey did not ask respondents to classify 'dingoes' as pests or otherwise. Given that the majority of respondents regarded other native species (including possums (Phalangeroidea), kangaroos (*Macropus* spp.) and wombats (*Vombatus ursinus*)) as 'non-pests', the responses may have been different if dingoes had been separately identified.

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The dingo is viewed by many as an animal which has an important place in Australian ecosystems, and one which should be preserved as far as possible (Section 5.3.3). Such attitudes have been enshrined in legislation in some States and Territories (Sections 3.3 and 5.2). Strength of opinion can be influenced by the perception of purity of strain; conservationists wish to preserve pure dingoes but see hybrids and feral dogs as a threat to the dingo (Section 2.9). Others believe that because a dingo-sized canid has been present in Australia long enough to have affected the biodiversity of the communities in which they occur, the removal of wild dogs from these environments might have unforeseen impacts on biodiversity, and that some wild dogs should therefore be retained irrespective of their genetic status.

Nor is there a common view about dingoes and other wild dogs amongst livestock producers. Sheep graziers would be unanimous in condemning the presence of a single wild dog near their flocks, whereas cattle producers tend to have a variety of opinions. Some cattlemen are ambivalent towards dogs. Others reflect previous or current bad experiences of calf predation by wild dogs and regularly control them; for example, 71% of Northern Territory pastoralists surveyed in 1995 indicated that dingoes were a major or serious pest on their properties (Eldridge and

Bryan 1995). Another group recognise the potential role of dingoes in controlling macropod abundance and are prepared to experience some losses of calves in the belief that overall enterprise productivity is better when there is less potential competition for forage between cattle and macropods (Section 3.6.5). Still others tolerate dingoes and other wild dogs until predation of calves becomes apparent and then institute a control program (K. Watters, grazier, New South Wales, pers. comm. 1984; D. Wurst, Parks and Wildlife Commission (Northern Territory), Northern Territory, unpublished data, 1995). Some are strongly opposed to baiting because of the perceived risk to their own dogs. There is also the perception among some landholders living near national parks and other conservation reserves that wild dogs belong to the government and therefore responsibility for wild dog control on adjacent grazing lands lies with State agencies (J. Burley, Department of Natural Resources and Environment, Victoria, pers. comm. 1999). As with other groups, trappers hold different views on the relative merits of different control methods and the role of wild dogs in animal communities (Ward 1986). The views of trappers must be considered because these people are often responsible for much of the control effort spent on wild dogs.

In 1981, evidence from a series of public meetings and submissions from landholders within the original barrier fence in Queensland (Holden 1991) showed that attitudes toward wild dogs were explained in part by the location of their holding in relation to the fence. Similar trends are evident in other States. Those individuals who have first-hand and ongoing experience with livestock predation by wild dogs generally express the strongest sentiments. These people often rate wild dogs as their biggest productivity inhibition. Those landholders that are far removed from any threat of predation tend to be less concerned about wild dogs and may be more subject to influences from non-agricultural sectors of the community. Fear of predation by wild dogs has meant that in some areas greater control effort has been spent on wild dogs than other pests that may be more damaging in a less obvious way.

Traditional Aboriginal groups generally perceive dingoes and other wild dogs as a component of the natural landscape with a rightful place therein. Dingoes often feature in Aboriginal mythology and are therefore seen as part of the cultural heritage of Australia. These interests must be kept in mind when devising management programs for dingoes. In general, conflicts with the views of Aboriginal people rarely occur because of the alienation of traditional Aboriginal people from most of the grazing areas where control work is undertaken. However, where Aboriginal people maintain an ongoing affinity to these areas their concerns must be considered and included in the planning process.

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Public perception of wild dogs as objects of fear will also influence attitudes towards local management. Without doubt, the most publicised case of dingoes as predators of humans involved the alleged taking of a baby, Azaria Chamberlain, by a dingo at Uluru in central Australia in 1980. Reaction to the allegation led to an immediate control program around the camping area where the Chamberlains were staying. Local control and education programs have been instigated in other national parks and nature reserves in response to attacks on people (for example, Fraser Island; Australian Associated Press 1998).

As a result of these various views in society, as well as the results of scientific research, the approach to wild dog control has altered considerably in the past 20–30 years (Chapter 5). Management strategies now focus on problem areas, that is, in livestock paddocks and on neighbouring land. For example, dogging or baiting forays are no longer made into the vast areas beyond pastoral leases in Western Australia. Indeed, such control work would be condemned as being economically and environmentally undesirable.

Nevertheless, scientific research and analysis does not always alter management practices. For example, the usefulness of bounties has been discredited in a number of reviews (Section 5.1.1) yet the recent proposed removal of bounties from Queensland legislation resulted in heated debate (C. McGaw, Department of Natural Resources, Queensland, pers. comm. 1999). A compromise allowing the payment of bounties by local governments resulted from pressure by some community groups.

Attitudes about controlling wild dogs are influenced by the control methods used. For example, pressure from animal welfare groups has resulted in changes to legislation and policy for the use of leghold traps in Victoria, the Australian Capital Territory and New South Wales. Some sections of the community do not accept the use of poisons, and would oppose any control campaigns based on baiting (Section 4.2.4). Indeed, some people regard the killing of an animal, even if it is considered to be a pest, as wrong.

4.2 Animal welfare issues

4.2.1 General

Animal welfare groups aim to ensure that all animals are treated humanely and that actions that cause stress and suffering should be minimised as far as is feasible. Groups such as the Royal Society for the Protection of Cruelty to Animals (RSPCA) and the Australian and New Zealand Federation of Animal Societies (ANZFAS) accept that control of wild dogs may be required in certain circumstances, but advocate restrictions on the type of control techniques that are used. For example, the RSPCA believes that the use of 1080 (sodium fluoroacetate) poison on native species is unacceptable, and that its use against introduced species should be strictly controlled by legislation. Non-lethal means such as exclusion fencing are encouraged.

Conversely, owners of livestock have legal and moral obligations under the various State Prevention of Cruelty to Animals Acts to provide the best husbandry possible for their livestock and there are model codes of practice to

ensure this (Animal Health Committee, of the Standing Committee for Agriculture 1990). Predation by dogs is not humane and most graziers are concerned by the suffering and distress imposed on their animals. This is particularly so when surplus killing and injury occurs. The adverse effects of predation on the welfare of livestock is likely to influence landholders' attitudes to management of wild dogs, including the control and conservation of dingoes. Counter to this is the argument that sheep should not be grazed in areas where predation by wild dogs is likely and poses the question whether governments should subsidise wild dog control in such areas.

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Clearly, welfare concerns must be considered in all control programs involving lethal techniques. These should be as target-specific as possible and take into account maximum welfare for the target species as well as welfare issues relating to the accidental capture or killing of other species.

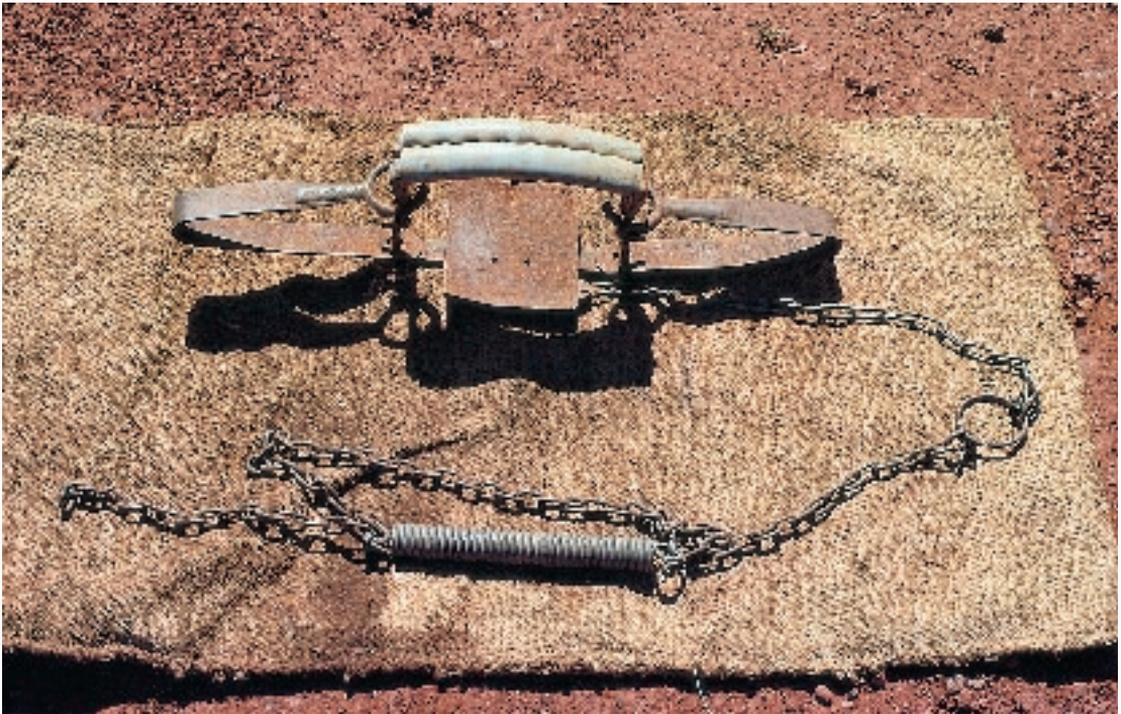
4.2.2 Shooting

Shooting by skilled marksmen is probably the most humane method of controlling wild dogs and for this reason is the favoured control technique of the RSPCA. The objective should be to kill the animal as quickly and cleanly as possible with a shot to the head. In some States and Territories, a Code of Practice or government agency policy specifies the minimum specifications (calibres, projectile weight, range) for the shooting of feral or pest animals (Section 6.4.2). Shooting can usually only be viewed as an opportunistic method of wild dog control, although it can sometimes be useful to target individual animals inside sheep zones. It is not a cost-effective option for reducing populations of wild dogs.

4.2.3 Trapping

Steel-jawed leg-hold traps have been traditionally used in Australia for wild dog control. These traps are generally viewed as inhumane, with the bare steel jaws causing tissue damage, serious cuts, broken bones, dislocated joints and sometimes amputation of feet of the captured animal (Fleming et al. 1998). The degree of injury and suffering of a trapped animal is also related to the length of time that the animal spends in the trap (that is, how often traps are checked) and whether analgesic drugs (C. Marks, Victorian Institute of Animal Sciences, Victoria, pers. comm. 1998) or poisons have been applied to the trap to reduce stress or hasten death (Fleming et al. 1998). As well, the sites where traps are set can greatly affect the likelihood of catching non-target animals (Newsome et al. 1983b). Different groups of non-target animals suffer different levels of injury (Fleming et al. 1998). For example, possums mostly had minor injuries in Soft Catch, traps whereas 73% of varanids experienced major trauma.

There is an increasing awareness of the inhumaneness of steel-jawed traps. Modifications to existing and new traps and capture devices that are more humane continue to be developed and are progressively being adopted. The Victorian treadle-snare and the Victor Soft Catch, padded trap and modified Lanes traps have been shown to result in fewer injuries to trapped animals (Meek et al. 1995; Fleming et al. 1998) and their use is preferred over steel-jawed traps by animal welfare groups. In Victoria, the treadle snare has replaced the steel-jawed trap for use in wild dog control, except in special circumstances. In New South Wales, steel-jawed traps are outlawed, though the use of padded traps and treadle snares is allowed. These must be used in accordance with a code of practice that specifies, amongst other things, that traps should be checked daily. In South Australia, steel-jawed traps are outlawed in the 60% of the State outside the Dog Fence. Trapping is still the preferred technique to target dingoes killing sheep inside the fence and where poisoning has proved unsuccessful.



Padding steel-jawed traps should be promoted to improve the humaneness of trapping (Source: P. Thomson).

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In some areas, the practice of applying strychnine poison to the jaws of traps is advocated. The strychnine is bound into a cloth and the trapped animal bites on the soft material and ingests the poison. This results in a rapid death, and is seen by some to be preferable to the animal remaining in the trap until dying of exhaustion or exposure, or being discovered many hours later by the trapper. However, strychnine is classed as an inhumane poison (Section 6.4.4) and its use for other purposes is not sanctioned. Strychnine cloths are generally favoured in the more remote pastoral regions, where trappers cover large areas and cannot return to their traps within a reasonable time. Additionally, many doggers believe that traps set for rogue animals should not be visited too often as the presence of human scent near the trap may deter the target animal (B. Morris, dogger, Yass Rural Lands Protection Board (New South Wales), pers. comm. 1998). Daily checking of traps is simply not a practical option in all circumstances. In Western Australia and South Australia, steel-jawed traps can be used for wild dog control only if strychnine is applied to the traps. In New South Wales, strychnine cloths must be applied to traps that are not checked daily. A fast-acting, more-humane replacement poison for strychnine on trap jaws would be preferable and requires investigation. (Section 8.7). The use of 1080 poison on traps is not practical because it is too slow acting.

4.2.4 Poisoning

The RSPCA is generally opposed to the use of poisons (RSPCA 1997) but may accept target-specific baits containing humane toxins. It is widely recognised that poison baiting remains one of the few viable options available to control wild dogs, particularly in the more remote rangeland areas (Section 6.4.4).

Strychnine baits are viewed as inhumane because the affected animals remain conscious and appear to suffer pain and anxiety

from the onset of clinical signs through to death from asphyxia and exhaustion. The clinical signs of strychnine poisoning in dogs are: deep reflexes and cramping of muscles, particularly in the legs; muscular spasms that increase in severity and extent through to death from respiratory failure; and vomiting and diarrhoea.

1080 is now the preferred poison for use in wild dog control throughout Australia. It is a far more selective poison than strychnine and poses minimal risk to non-target animals. Canids are particularly susceptible to 1080. Many other mammals are less sensitive to the poison, particularly many native species in Western Australia that have evolved an enhanced tolerance due to exposure to plants containing 1080 (King 1984). Birds and reptiles are in turn less susceptible to 1080 than mammals.

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1080 causes the blocking of the Krebs cycle, the major cellular biochemical mechanism for releasing energy from food. In dogs, the primary action of 1080 is on the central nervous system. Symptoms appear after a latent period of up to several hours, the period varying according to the amount of poison ingested. Dogs become excited, may become nauseated, frequently howl, and exhibit running fits (McIlroy, 1981). The final phase of poisoning involves continuous muscular contraction and death through lack of oxygen supply to the respiratory centre. During convulsions, affected dogs are unconscious and appear to be unaware of their surroundings, suggesting that they are not suffering pain or distress (Gregory 1991). Cases of sub-lethal human poisoning support the view that 1080 is a relatively humane poison; victims convulsed but later reported no recollection of pain or physical distress (Gregory 1991). In Victoria, research is underway to develop an orally-active analgesic for incorporation into fox baits to counter debate about the humaneness of

1080 and to reduce regurgitation and multiple bait take by foxes (C. Marks, Victorian Institute of Animal Sciences, Victoria, pers. comm. 1997). Success in this work would also have application to wild dog baiting.

4.2.5 Control at breeding dens

In the past, doggers searched for dens each breeding season, in order to fumigate or capture the pups, bitch, and any other associated adults. This activity was aided by the use of sniffer dogs to seek out the dens. As for other control techniques, the associated welfare issues need to be considered. The practice of blocking off the den entrances if the pups cannot be retrieved is clearly unacceptable from a welfare aspect.

4.2.6 Exclusion fencing

The use of exclusion fencing is generally regarded as causing fewer animal welfare impacts than lethal control means. However, fences alter the movements of larger ground-based animals and care must be taken with design and placement of fences so as not to adversely affect their survival. Electric dingo fences can trap and kill macropods, emus (*Dromaius novaehollandiae*) and echidnas (*Tachygllossus aculeatus*).

4.2.7 Biological control

Wild dogs are susceptible to many diseases (Section 2.7). It is unlikely that the release of diseases already present in the wild would be effective for biological control. Given the fact that lethal diseases generally cause suffering and emaciation, and also affect domestic dogs, this type of control is unlikely to be supported by welfare groups or the general public.

Other forms of biological control may be possible in the future. The RSPCA supports the concept of hormonal control to limit reproduction (RSPCA 1997). The RSPCA and ANZ-FAS strongly support the development of fertility control measures, such as immunocontraception (Tyndale-Biscoe 1994), as humane techniques for controlling pest animals. Immunocontraception research is still in its early stages and the technique has not yet

been used for the control of any pest species. Domestic dogs and desirable populations of dingoes would be susceptible to any form of biological control targeting problem wild dogs. Transmissible forms of fertility control such as immunocontraception are therefore unlikely to gain favour with the general community.

4.3 Public health issues

4.3.1 Diseases and parasites

There have been a number of publicity campaigns aimed at reducing the prevalence of hydatidosis (causal agent *Echinococcus granulosus*) in humans (D. Jenkins, Australian Hydatids Control and Epidemiology Program, pers. comm. 1998). Although occurrence is rare, the disease can be fatal. In areas where hydatid infection of domestic dogs and livestock is endemic, awareness of the disease is highest. However, few people are aware of the sylvatic hydatids cycles between wild dogs and wildlife or between wild dogs and livestock (Section 3.4). Local awareness is likely to increase participation in programs to control wild dogs and increase the pressure on government instrumentalities to control wild dogs at the interface of public and grazing lands.

If rabies (Rhabdoviridae) ever became established in Australia, there would be a much greater public impetus to control all free-roaming dogs. Trade-offs between the desire to conserve dingoes and concerns about human health would require much discussion, as the range of stakeholders involved would increase substantially.

4.3.2 Interactions with humans

Aboriginal people sometimes used dingoes for hunting, as food, decoration (fur), mobile blankets or currency (scalps) (Meggitt 1965; Hamilton 1972) but preferred European domestic dogs when they became available. These dogs remained in the camps and thus obviated the need to seek new dingo pups each year or to retain adult animals by breaking one of their legs. Domestic breeds also barked and thus were better sentinels (Hamilton 1972; White 1972).

Free-roaming dogs are still common in remote Aboriginal settlements and the presence of these dogs has human health implications for the communities (Section 3.4). Human health programs that involve controlling wild dogs in and around Aboriginal communities need to address the potential conflicts that arise from traditional Aboriginal views of dingoes and other wild dogs (Sections 3.3 and 3.7).

4.4 Conservation issues

Community attitudes to dingoes have changed considerably since the early days of European settlement when they were seen only as a threat to the fledgling pastoral industries. Research in the last 30 years has greatly increased the understanding of dingoes and led to more rational and effective management techniques that significantly reduce the risk that dingoes pose to the pastoral industries. Concurrently, there has been an increase in public awareness of the importance of conserving biodiversity. Dingoes are now commonly perceived as native fauna and are formally recognised as such in some States (for example, New South Wales). Consequently, there is now a public expectation that dingoes will be conserved as part of Australian biodiversity.

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During the past 30 years, there has been considerable conflict between conservationists and managers of wild dogs. Three issues have been central to this conflict. The first is that the public perception of dingoes as a native species creates an expectation that they will be conserved. Thus, some sections of the public are opposed to all wild dog control, particularly when it is conducted in conservation reserves.

Resolution of this conflict has been achieved in some States and Territories by attributing a different status to wild dogs dependent on their location. For example, in New South Wales, the National Parks and Wildlife Service effectively recognises dingoes as

native fauna, and while they are ‘unprotected’ in conservation reserves, they are not a declared noxious species until they move off the reserve (Chapter 5). Control within conservation reserves is only permitted when dingoes emanating from there are implicated in stock losses and measures conducted outside the reserve have failed to solve the problem.

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The second issue arising from this is the dilemma of how to differentiate dingoes from other wild dogs. This is compounded by the exhibition of dingo coloration in many hybrids. While DNA fingerprinting might determine the frequency of dingo and domestic breed genes, this technique does not address public perceptions. The genetics of a wild dog is largely irrelevant to many people. These people are more concerned with the appearance of a particular wild dog and compare it with their concept of a dingo. For conservation directions to be set, public and expert inputs must be collected. A decision is needed on what proportion of a wild dog population is required to be pure dingo before conservation efforts are instituted. The feasibility of conservation strategies on the mainland also needs investigation. After these decisions are made, conservation policy can be formulated.

The third issue is the risk to non-target species during wild dog control programs and particularly during aerial baiting programs with 1080. Many concerns about non-target risks have been allayed by the seminal works on the toxicity of 1080 to Australian fauna by John McIlroy and Dennis King and their collaborators (McIlroy 1981). In some States, reductions in loadings of 1080 in baits, better bait placement and a reduction in the number of baits used have resulted in a theoretically negligible risk to non-target species (Fleming 1996a). However, because of public misconceptions or lack of education about 1080, there remains some concern

about non-target risk during wild dog baiting (Section 8.11). This issue needs to be addressed by a public education program and by field-based studies to assess non-target risk and confirm that wild dog baiting is target-specific and effective.

The commonly held but unproven belief of a universal, inverse relationship between wild dog and fox abundance (Section 2.10.1) has been popularly interpreted to mean that conserving dingo populations may limit the distribution and abundance of foxes and thus reduce their impact on small and medium-sized native animals. If this proves true, conserving dingoes and other wild dogs could enhance the conservation of native species threatened by foxes.